LBT-D507/D507CD/D507CDM

SERVICE MANUAL

AEP Model
East European Model
LBT-D507

UK Model
LBT-D507CD/D507CDM

These systems are composed of following models.
As for the service manual, it is issued for each component model, then, please refer to it.

COMPONENT MODEL NAME FOR THESE SYSTEM

	LBT-D507				LBT-D507CD	LBT-D507CDM
	AEP	G	IT	EE	UK	
AMPLIFIER	TA-D507					
CASSETTE DECK	TC-D507					
TUNER	ST-D707					
CD PLAYER	CDP-M43					
CD CHANGER	CDP-C422M					CDP-C422M
TURNTABLE SYSTEM	PS-D707				PS-LX47P	
SPEAKER SYSTEM	SS-A507				SS-A507E	

G : Germany model
IT : Italian model
EE : East European model

PARTS LIST

- Items marked "*" are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.

Part No.	*Description*	*Remarks*
1-501-369-11	ANTENNA	(EXCEPT G)
1-501-374-11	ANTENNA LOOP	
1-559-533-11	CORD, CONNECTION (TA-CDP)	(D507CDM)
1-574-314-11	CORD (WITH CONNECTOR) (ST-CDP)	
1-590-822-11	CORD (WITH CONNECTOR) (ST-TA-TC)	
1-590-823-11	CORD (WITH CONNECTOR) (ST-TA-TC)	
1-693-032-11	COMMANDER (STANDARD TYPE) (RM-S571)	
3-707-584-01	COVER, BATTERY (RM-S571)	
3-754-664-11	MANUAL, INSTRUCTION (English) (UK)	
3-754-664-41	MANUAL, INSTRUCTION (English, F, E, P) (AEP)	
3-754-664-51	MANUAL, INSTRUCTION (D, NL, S, I) (AEP, G, IT)	
3-754-664-61	MANUAL, INSTRUCTION (English, D, SU, PL) (EE)	
3-754-847-11	MANUAL, INSTRUCTION (English, F, E, P) (D507CDM)	
*4-951-714-01	INDIVIDUAL,CARTON (FOR TA, ST, TC) (AEP, EE)	
*4-951-715-01	INDIVIDUAL, CARTON (FOR TA, TC) (AEP, G, IT)	
*4-951-717-01	INDIVIDUAL CARTON (UK)	

F : French
E : Spanish
P : Portuguese
D : German
NL : Dutch (Holland)
S : Swedish
I : Italian
SU : Russian
PL : Poland

STEREO COMPONENT SYSTEM

SONY®

MICROFILM

English
92B1863-1
Printed in Japan

© 1992.2

Sony Corporation
Audio Group

Published by Customer Relations and Service Group

TA-D507

SERVICE MANUAL

AEP Model
UK Model
East European Model

This set is the amplifier section in LBT-D507/D507CD/D507CDM.

SPECIFICATIONS

Continuous RMS power output	60 W + 60 W (6 ohms, at 1 kHz, 5 % THD) 50 W + 50 W (6 ohms, DIN, 1 kHz)
Music power output	90 W + 90 W (6 ohms, at 1 kHz, 10 % THD)

Input	Jack type	Sensitivity	Impedance
PHONO (MM)	Phono	3.3 mV	47 kohms
VIDEO	Phono	270 mV	47 kohms

Audio output	Jack type	Impedance
SURROUND SPEAKER	Phono	Accepts speakers of 16 ohms
HEADPHONES	Stereophone	Accepts headphones of 8 ohms or more

Frequency response	10 Hz to 50 kHz $^{+0}_{-3}$ dB
Power requirements	220 – 230 V AC, 50/60 Hz
Power consumption	150 W
Weight	Approx. 6.0 kg
Dimensions	Approx. 355 × 132 × 320 mm (w/h/d, including projections)

Design and specifications are subject to change without notice.

Note

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

INTEGRATED STEREO AMPLIFIER

SONY®

MICROFILM

TABLE OF CONTENTS

Section *Title* *Page*

SECTION 1. GENERAL 3

SECTION 2. DIAGRAMS

2-1. Circuit Boards Location 3

2-2. Schematic Diagrams — Panel Section — 4

2-3. Schematic Diagrams — Main Section — 8

2-4. Printed Wiring Boards 13

2-5. Semiconductor Lead Layouts 18

SECTION 3. EXPLODED VIEWS

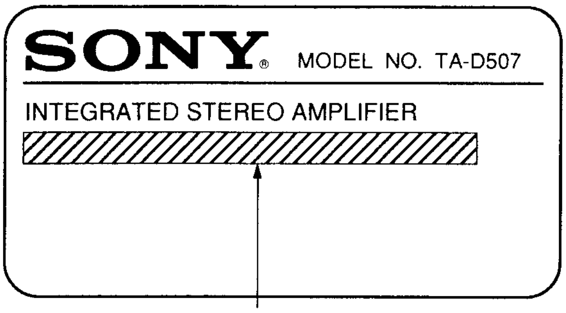
3-1. Cabinet Section 20

3-2. Main Board Section 21

SECTION 4. ELECTRICAL PARTS LIST 22

MODEL IDENTIFICATION

— Model Number Portion —



AEP, Italian, East Europian model : AC : 220–230V ~ 50/60Hz

Germany model : SYSTEM LBT-D507

AC : 220–230V ~ 50/60Hz

UK model : AC : 240V ~ 50/60Hz

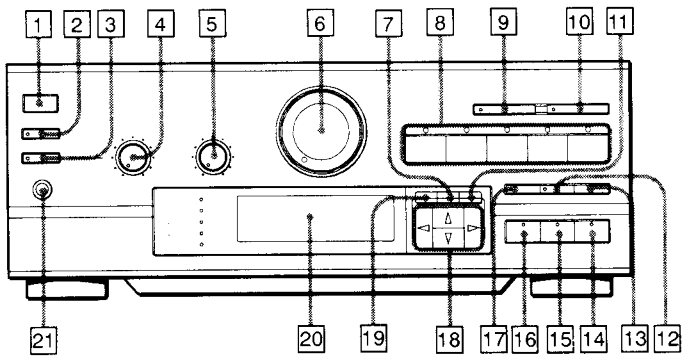
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1
GENERAL

This section is extracted from instruction manual.

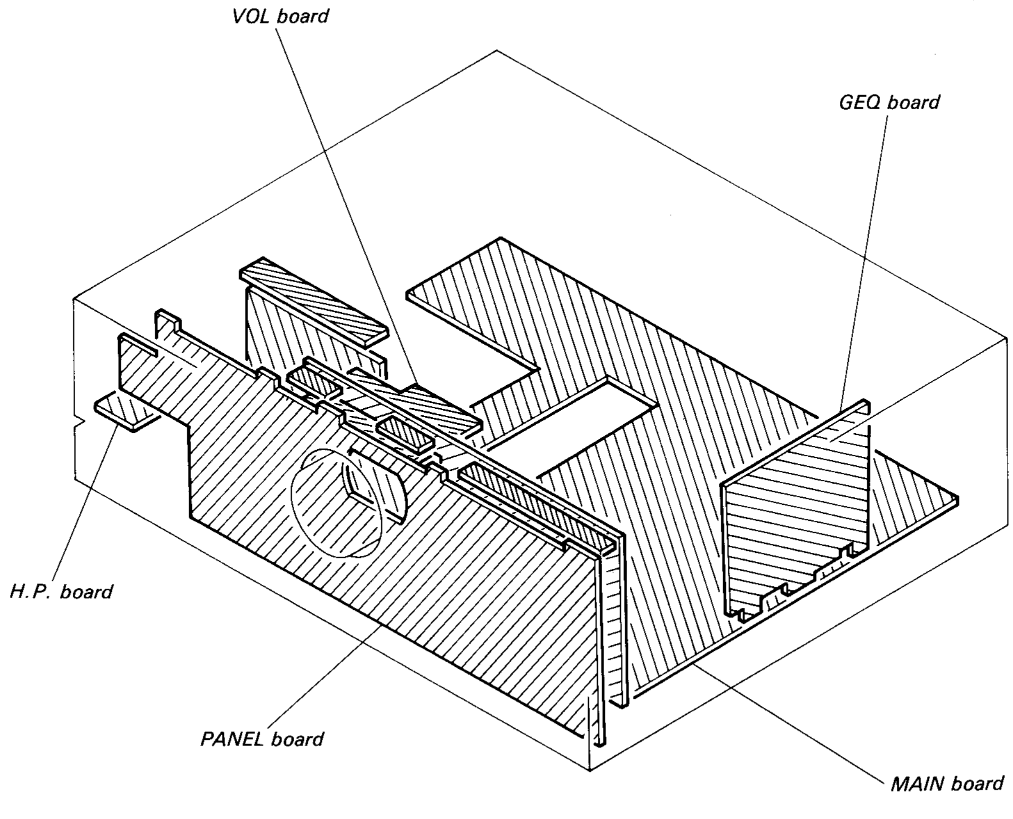
Location of Controls


1
2
3
4
5
6
7
8
9
10
11
21
20
19
18
17
16
15
14
13
12

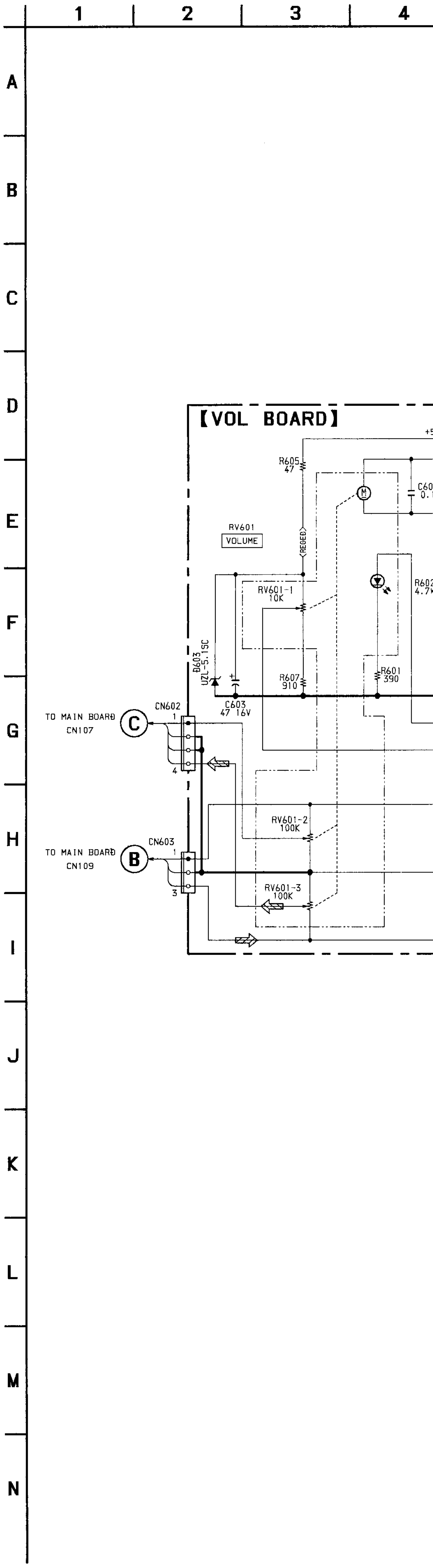
1 POWER switch (16)
2 EFFECT button and indicator (60)
3 DBFB button and indicator (18)
4 DBFB LEVEL control and indicator (18)
5 BALANCE control (18)
6 VOLUME control (18)
7 FLAT button (62)
8 Function selectors and indicators
9 EQ REC button and indicator (40)
10 PROGRAM FUNCTION button and indicator (122)
11 REVERSE button (62)
12 SURROUND MODE button and indicator (54)
13 SURROUND LEVEL button (54)
14 EQ button and indicator (58)
15 PERSONAL FILE 1 - 5 button and indicator (64)
16 SELECT 5 button and indicator (56)
17 MEMORY button and indicator (64)
18 CURSOR CONTROL buttons (56, 58, 64, 66)
19 DISPLAY button (62)
20 Display window
21 HEADPHONES jack

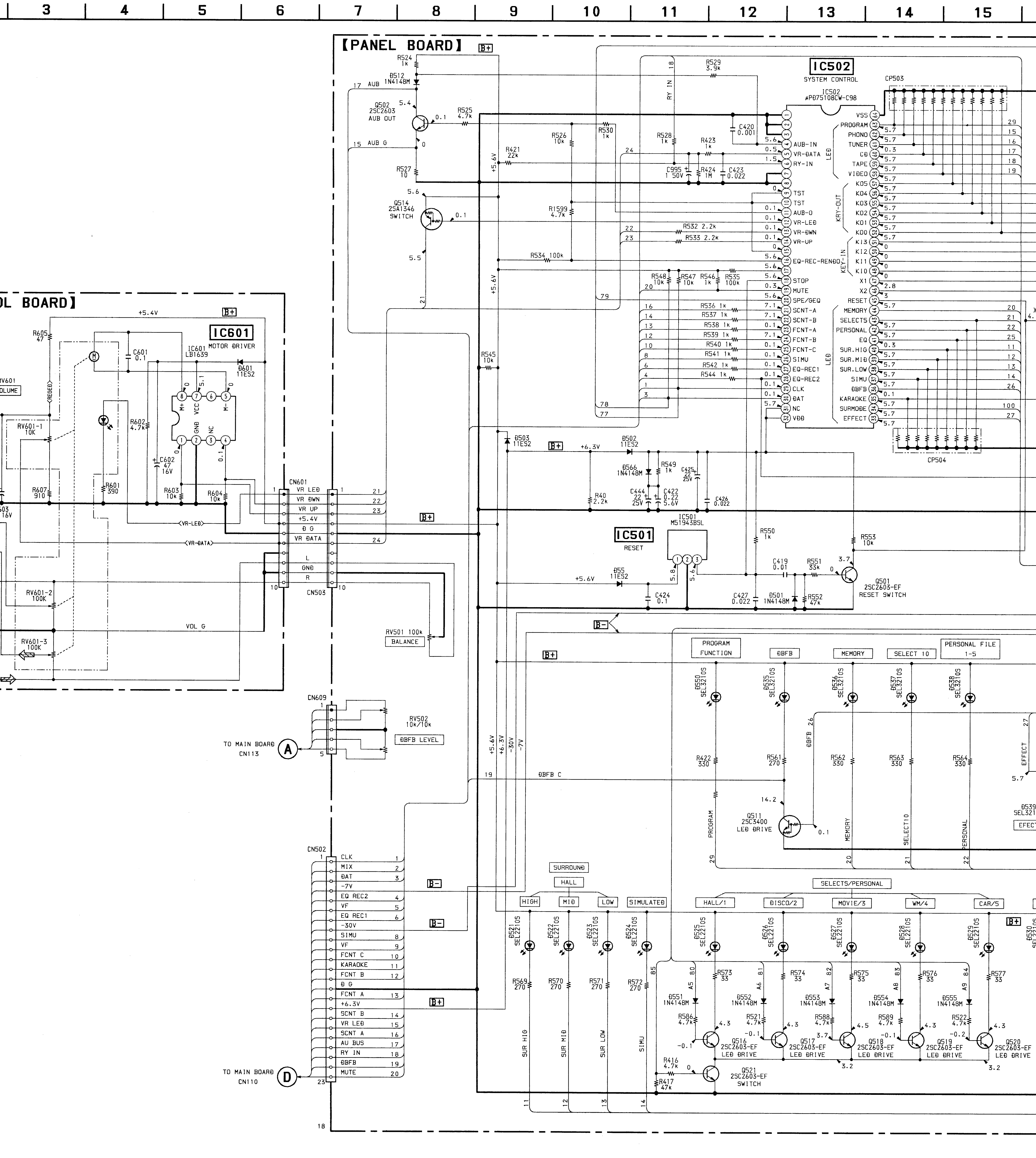
SECTION 2
DIAGRAMS

2-1. CIRCUIT BOARDS LOCATION


VOL board
GEQ board
H.P. board
PANEL board
MAIN board

2-2. SCHEMATIC DIAGRAMS – PANEL Section –


1
2
3
4
A
B
C
D
E
F
G
H
I
J
K
L
M
N
【VOL BOARD】
R605 47
RV601 VOLUME
REGED
RV601-1 10K
D603 UZL-5.1SC
C603 47 16V
R607 910
R601 390
R602 4.7K
C60 0.1
CN602
TO MAIN BOARD CN107
C
CN603
TO MAIN BOARD CN109
B
RV601-2 100K
RV601-3 100K


3
4
5
6
7
8
9
10
11
12
13
14
15
【PANEL BOARD】
B+
DL BOARD】
IC502
SYSTEM CONTROL
IC502
μPD7510BCW-C98
CP503
CP504
IC601
MOTOR DRIVER
IC601
LB1639
IC501
RESET
IC501
M51943BSL
Q502
2SC2603
AUB OUT
Q514
2SA1346
SWITCH
Q501
2SC2603-EF
RESET SWITCH
Q511
2SC3400
LED DRIVE
Q516
2SC2603-EF
LED DRIVE
Q517
2SC2603-EF
LED DRIVE
Q518
2SC2603-EF
LED DRIVE
Q519
2SC2603-EF
LED DRIVE
Q520
2SC2603-EF
LED DRIVE
Q521
2SC2603-EF
SWITCH
CN601
CN503
CN609
CN502
RV601
VOLUME
RV601-1
10K
RV601-2
100K
RV601-3
100K
RV501 100k
BALANCE
RV502
10k/10k
DBFB LEVEL
TO MAIN BOARD
CN113
TO MAIN BOARD
CN110
A
D
VR LED
VR DWN
VR UP
+5.4V
D G
VR DATA
L
GND
R
VOL G
CLK
MIX
DAT
-7V
EQ REC2
VF
EQ REC1
-30V
SIMU
FCNT C
KARAOKE
FCNT B
FCNT A
+6.3V
SCNT B
SCNT A
AU BUS
RY IN
DBFB
MUTE
VSS
PROGRAM
PHONO
TUNER
CD
TAPE
VIDEO
KO5
KO4
KO3
KO2
KO1
KO0
KI3
KI2
KI1
KI0
X1
X2
RESET
MEMORY
SELECT5
PERSONAL
EQ
SUR.HIG
SUR.MID
SUR.LOW
SIMU
DBFB
KARAOKE
SURMODE
EFFECT
AUB-IN
VR-DATA
RY-IN
TST
AUB-O
VR-LED
VR-DWN
VR-UP
EQ-REC-RENDO
STOP
MUTE
SPE/GEQ
SCNT-A
SCNT-B
FCNT-A
FCNT-B
FCNT-C
SIMU
EQ-REC1
EQ-REC2
CLK
DAT
NC
VDD
LED
KEY-OUT
KEY-IN
PROGRAM
FUNCTION
DBFB
MEMORY
SELECT 10
PERSONAL FILE
1-5
SURROUND
HALL
HIGH
MID
LOW
SIMULATED
SELECTS/PERSONAL
HALL/1
DISCO/2
MOVIE/3
WM/4
CAR/5
EFFECT
SUR HIG
SUR MID
SUR LOW
SIMU
DBFB C
+5.6V
+6.3V
-30V
-7V
B-
D503
11ES2
D502
11ES2
D55
11ES2
D601
11ES2
D512
1N4148M
D566
1N4148M
D501
1N4148M
D551
1N4148M
D552
1N4148M
D553
1N4148M
D554
1N4148M
D555
1N4148M
D550
SEL3210S
D535
SEL3210S
D536
SEL3210S
D537
SEL3210S
D538
SEL3210S
D521
SEL2210S
D522
SEL2210S
D523
SEL2210S
D524
SEL2210S
D525
SEL2210S
D526
SEL2210S
D527
SEL2210S
D528
SEL2210S
D529
SEL2210S
R524 1k
R525 4.7k
R526 10k
R527 10
R528 1k
R529 3.9k
R530 1k
R421 22k
R423 1k
R424 1M
R1599 4.7k
R532 2.2k
R533 2.2k
R534 100k
R535 100k
R536 1k
R537 1k
R538 1k
R539 1k
R540 1k
R541 1k
R542 1k
R544 1k
R545 10k
R546 1k
R547 10k
R548 10k
R549 1k
R40 2.2k
R550 1k
R551 33k
R552 47k
R553 10k
R601 390
R602 4.7k
R603 10k
R604 10k
R605 47
R607 910
R422 330
R561 270
R562 330
R563 330
R564 330
R569 270
R570 270
R571 270
R572 270
R573 33
R574 33
R575 33
R576 33
R577 33
R586 4.7k
R521 4.7k
R588 4.7k
R589 4.7k
R522 4.7k
R416 4.7k
R417 47k
C420 0.001
C995 1 50V
C423 0.022
C425 22 25V
C444 22 25V
C422 0.22 5.6V
C426 0.022
C419 0.01
C424 0.1
C427 0.022
C601 0.1
C602 47 16V

Note:

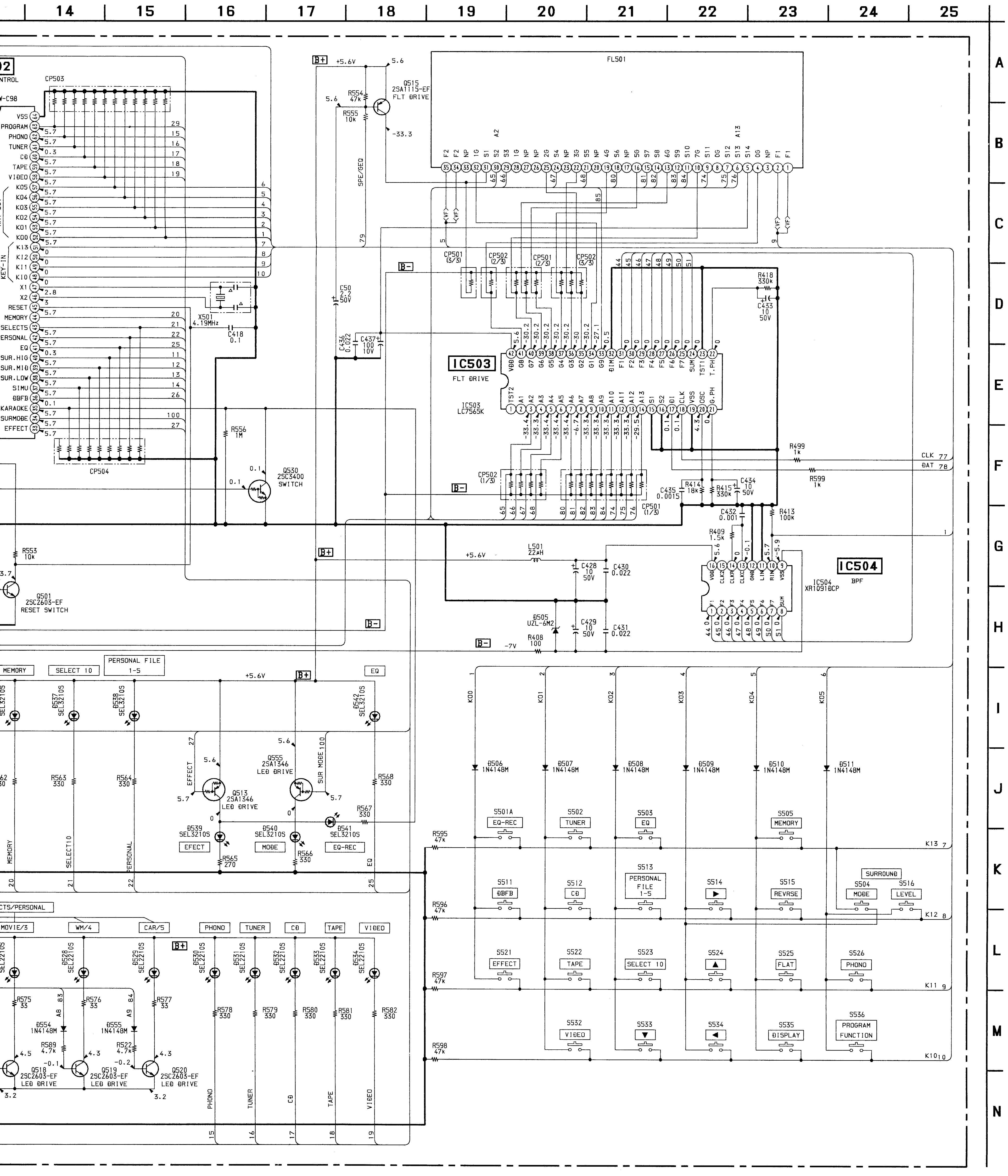
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- △ : internal component.
- ▭ : nonflammable resistor.
- ▭ : fusible resistor.
- ▭ : printed resistor.
- B+ : B+ Line
- B− : B− Line
- ▭ : adjustment for repair.
- ※ : selected to yield optimum performance.
- AC voltage readings in the bias oscillator with a VTVM.
- Total current is measured with no cassette installed.
- Power voltage is dc V and fed with regulated dc power supply from external power voltage jack.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.

  ⇨ : CD

  G: Germany

  IT: Italian

  EE: East European



14
15
16
17
18
19
20
21
22
23
24
25
A
B
C
D
E
F
G
H
I
J
K
L
M
N
CP503
VSS
PROGRAM
PHONO
TUNER
CD
TAPE
VIDEO
K05
K04
K03
K02
K01
K00
K13
K12
K11
K10
KEY-IN
X1
X2
RESET
MEMORY
SELECT5
EQ
SUR.HIG
SUR.MID
SUR.LOW
SIMU
DBFB
KARAOKE
SURMODE
EFFECT
CP504
X501 4.19MHz
C418 0.1
R556 1M
Q530 2SC3400 SWITCH
R553 10k
Q501 2SC2603-EF RESET SWITCH
B+ +5.6V
R554 47k
R555 10k
Q515 2SA1115-EF FLT DRIVE
-33.3
SPE/GEQ
C50 2.2 50V
C436 0.022
C437 100 10V
FL501
CP501 (3/3)
CP502 (2/3)
CP501 (2/3)
CP502 (3/3)
R418 330k
C433 10 50V
IC503
FLT DRIVE
IC503 LC7565K
CP502 (1/3)
CP501 (1/3)
R499 1k
R599 1k
CLK 77
DAT 78
C435 0.0015
R414 18k
R415 330k
C434 10 50V
C432 0.001
R413 100k
R409 1.5k
L501 22μH
C428 10 50V
C430 0.022
D505 UZL-6M2
C429 10 50V
C431 0.022
R408 100
-7V
IC504
IC504 XR1091BCP
BPF
MEMORY
SELECT 10
PERSONAL FILE 1-5
EQ
D537 SEL3210S
D538 SEL3210S
D542 SEL3210S
R563 330
R564 330
R568 330
Q513 2SA1346 LED DRIVE
Q555 2SA1346 LED DRIVE
R567 330
D539 SEL3210S
D540 SEL3210S
D541 SEL3210S
EFECT
MODE
EQ-REC
R565 270
R566 330
EFFECT
SUR MODE
MOVIE/3
WM/4
CAR/5
PHONO
TUNER
CD
TAPE
VIDEO
D528 SEL2210S
D529 SEL2210S
D530 SEL2210S
D531 SEL2210S
D532 SEL2210S
D533 SEL2210S
D534 SEL2210S
R575 33
R576 33
R577 33
R578 330
R579 330
R580 330
R581 330
R582 330
D554 1N4148M
D555 1N4148M
R589 4.7k
R522 4.7k
Q518 2SC2603-EF LED DRIVE
Q519 2SC2603-EF LED DRIVE
Q520 2SC2603-EF LED DRIVE
K00
K01
K02
K03
K04
K05
D506 1N4148M
D507 1N4148M
D508 1N4148M
D509 1N4148M
D510 1N4148M
D511 1N4148M
S501A EQ-REC
S502 TUNER
S503 EQ
S505 MEMORY
R595 47k
K13 7
S511 DBFB
S512 CD
S513 PERSONAL FILE 1-5
S514 ▶
S515 REVRSE
SURROUND
S504 MODE
S516 LEVEL
R596 47k
K12 8
S521 EFFECT
S522 TAPE
S523 SELECT 10
S524 ▲
S525 FLAT
S526 PHONO
R597 47k
K11 9
S532 VIDEO
S533 ▼
S534 ◀
S535 DISPLAY
S536 PROGRAM FUNCTION
R598 47k
K10 10

Note:

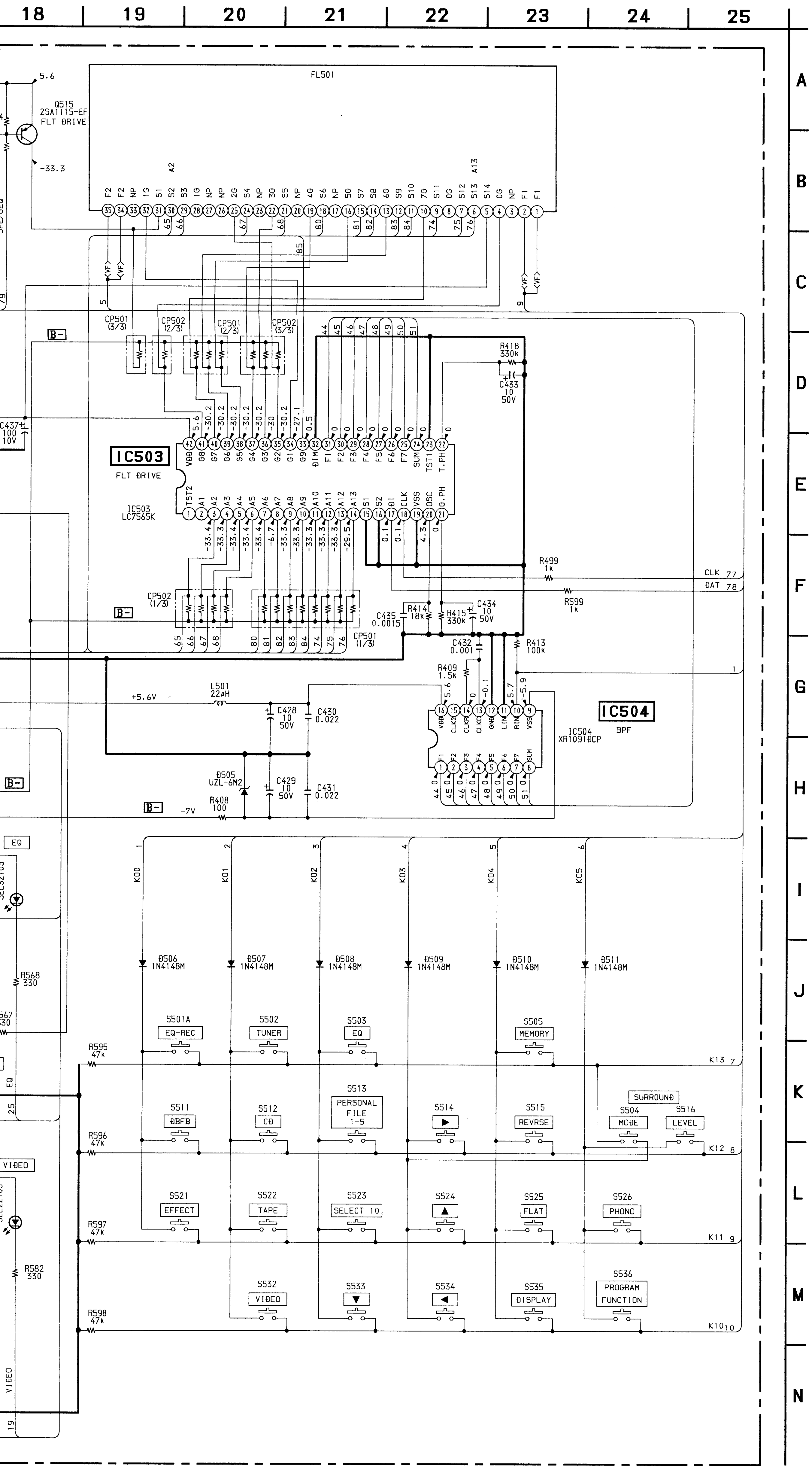
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $^1/_4$W or less unless otherwise specified.
- △ : internal component.
- ▭ : nonflammable resistor.
- ▭ : fusible resistor.
- ▭ : printed resistor.
- B+ : B+ Line
- B– : B– Line
- ▭ : adjustment for repair.
- ✻ : selected to yield optimum performance.
- AC voltage readings in the bias oscillator with a VTVM.
- Total current is measured with no cassette installed.

- Power voltage is dc V and fed with regulated dc power supply from external power voltage jack.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ➾ : CD

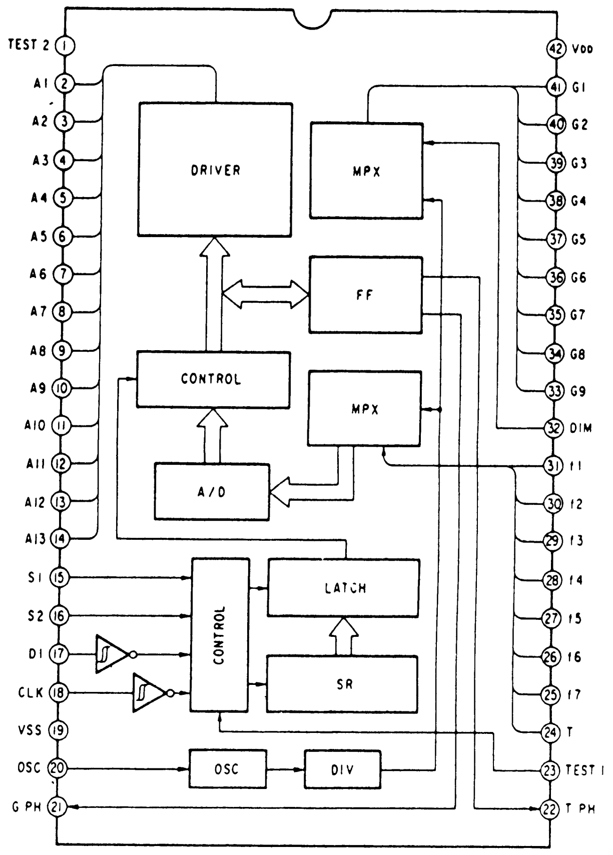
G: Germany

IT: Italian

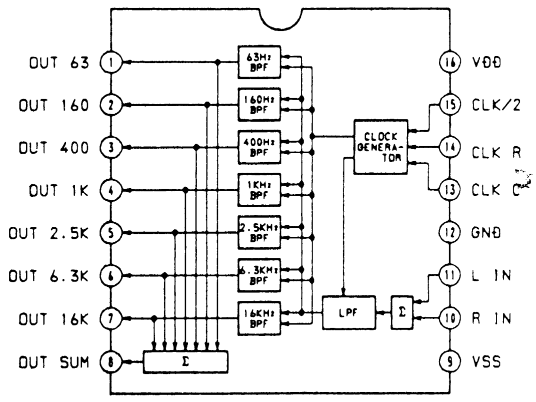
EE: East European


18
19
20
21
22
23
24
25
A
B
C
D
E
F
G
H
I
J
K
L
M
N
FL501
Q515 2SA1115-EF FLT DRIVE
IC503 FLT DRIVE
IC503 LC7565K
IC504 BPF
IC504 XR1091DCP
CP501 (3/3)
CP502 (2/3)
CP501 (2/3)
CP502 (3/3)
CP502 (1/3)
CP501 (1/3)
R418 330k
C433 10 50V
R499 1k
R599 1k
C434 10 50V
R414 18k
R415 330k
C435 0.0015
C432 0.001
R413 100k
R409 1.5k
L501 22μH
C428 10 50V
C430 0.022
D505 UZL-6M2
C429 10 50V
C431 0.022
R408 100
+5.6V
-7V
CLK 77
DAT 78
D506 1N4148M
D507 1N4148M
D508 1N4148M
D509 1N4148M
D510 1N4148M
D511 1N4148M
S501A EQ-REC
S502 TUNER
S503 EQ
S505 MEMORY
S511 DBFB
S512 CD
S513 PERSONAL FILE 1-5
S514 ▶
S515 REVRSE
SURROUND
S504 MODE
S516 LEVEL
S521 EFFECT
S522 TAPE
S523 SELECT 10
S524 ▲
S525 FLAT
S526 PHONO
S532 VIDEO
S533 ▼
S534 ◀
S535 DISPLAY
S536 PROGRAM FUNCTION
R595 47k
R596 47k
R597 47k
R598 47k
K13 7
K12 8
K11 9
K10 10
K00
K01
K02
K03
K04
K05
R568 330
R582 330
EQ
VIDEO

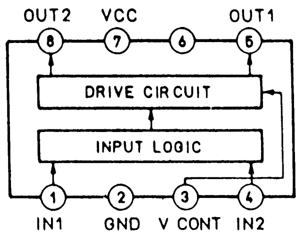
IC503 LC7565K


TEST 2
A1
A2
A3
A4
A5
A6
A7
A8
A9
A10
A11
A12
A13
S1
S2
DI
CLK
VSS
OSC
G PH
VDD
G1
G2
G3
G4
G5
G6
G7
G8
G9
DIM
F1
F2
F3
F4
F5
F6
F7
T
TEST 1
T PH
DRIVER
MPX
FF
CONTROL
MPX
A/D
LATCH
CONTROL
SR
OSC
DIV

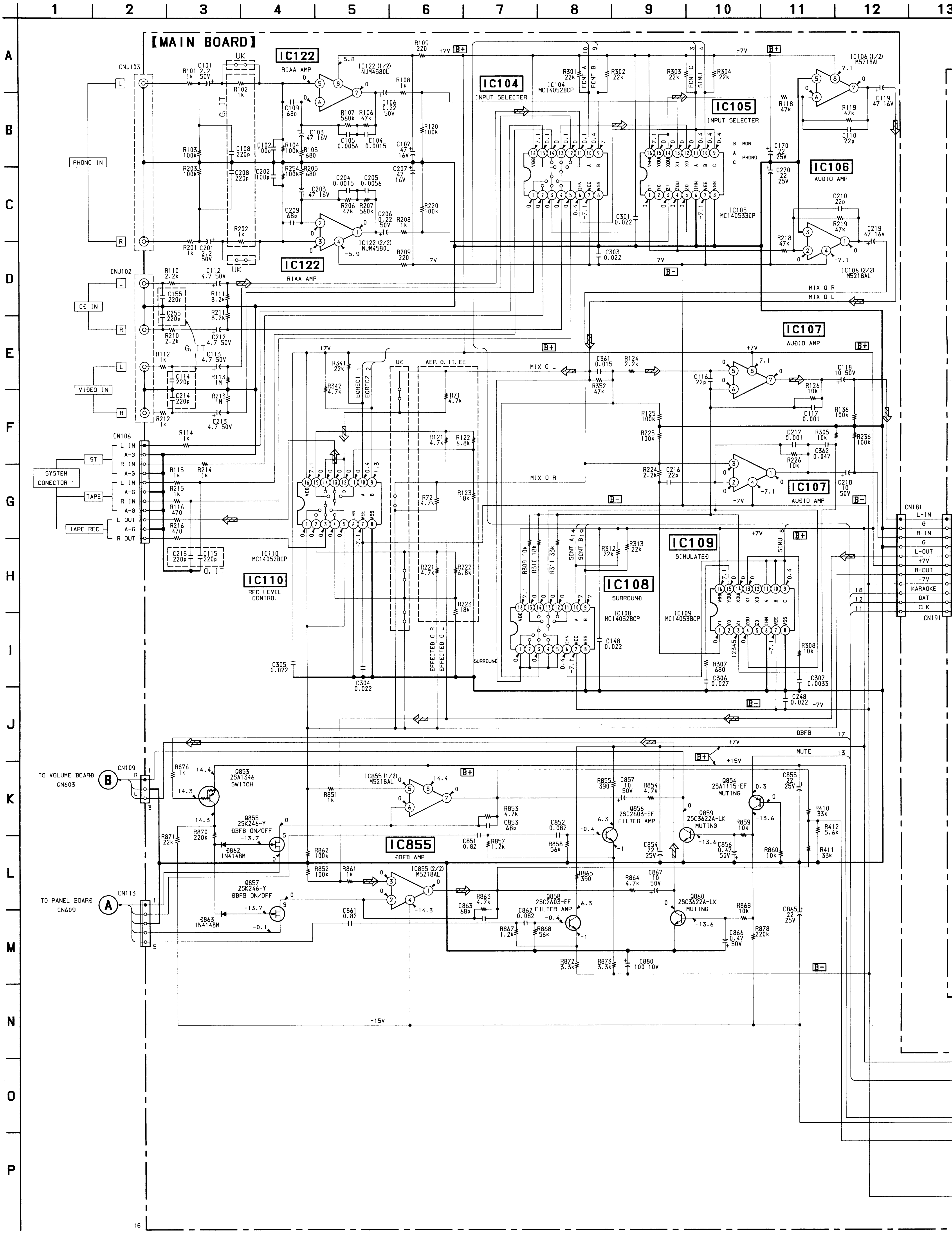
IC504 XR1091DCP


OUT 63
OUT 160
OUT 400
OUT 1K
OUT 2.5K
OUT 6.3K
OUT 16K
OUT SUM
VDD
CLK/2
CLK R
CLK C
GND
L IN
R IN
VSS
63Hz BPF
160Hz BPF
400Hz BPF
1KHz BPF
2.5KHz BPF
6.3KHz BPF
16KHz BPF
CLOCK GENERATOR
LPF
Σ

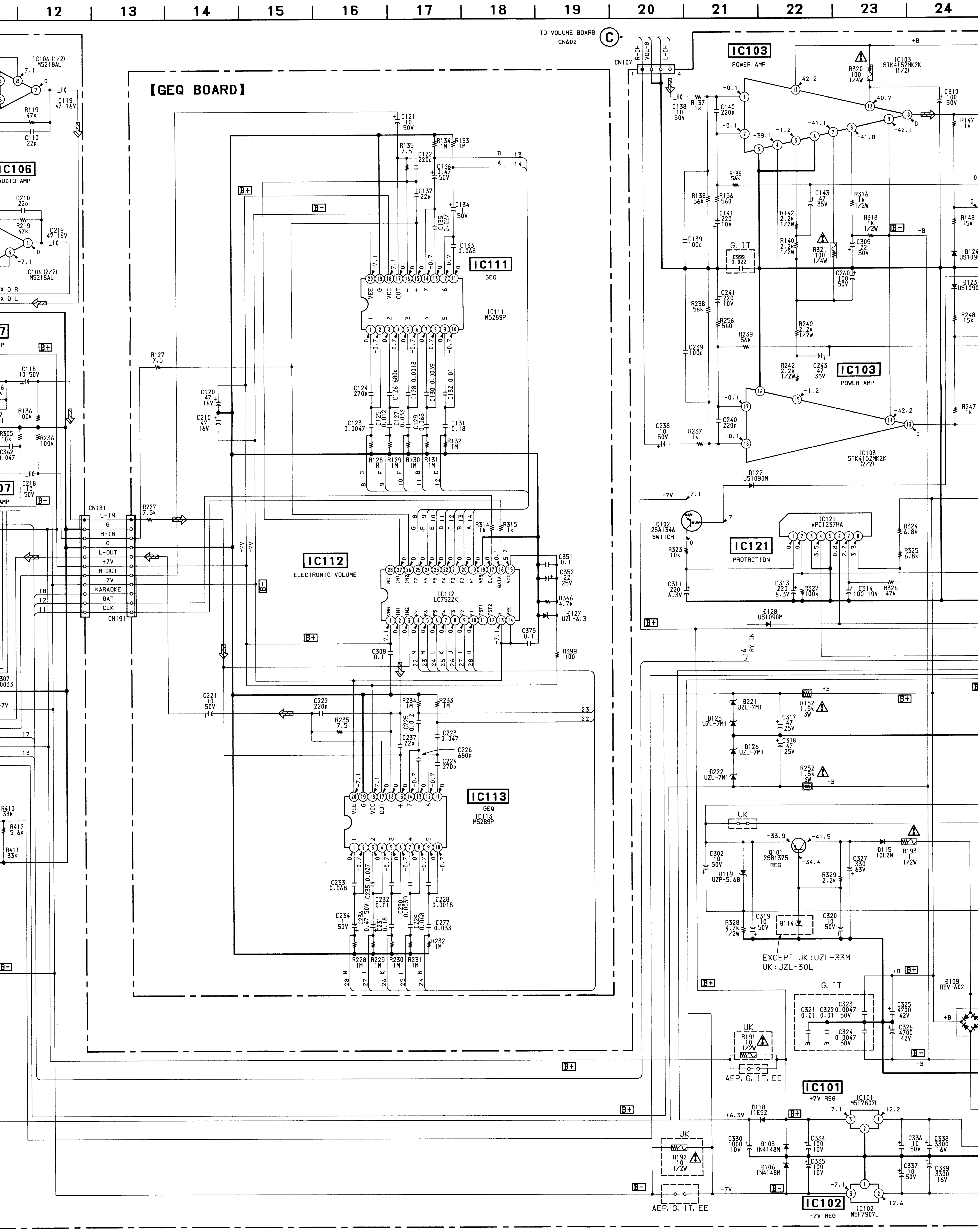
IC601 LB1639

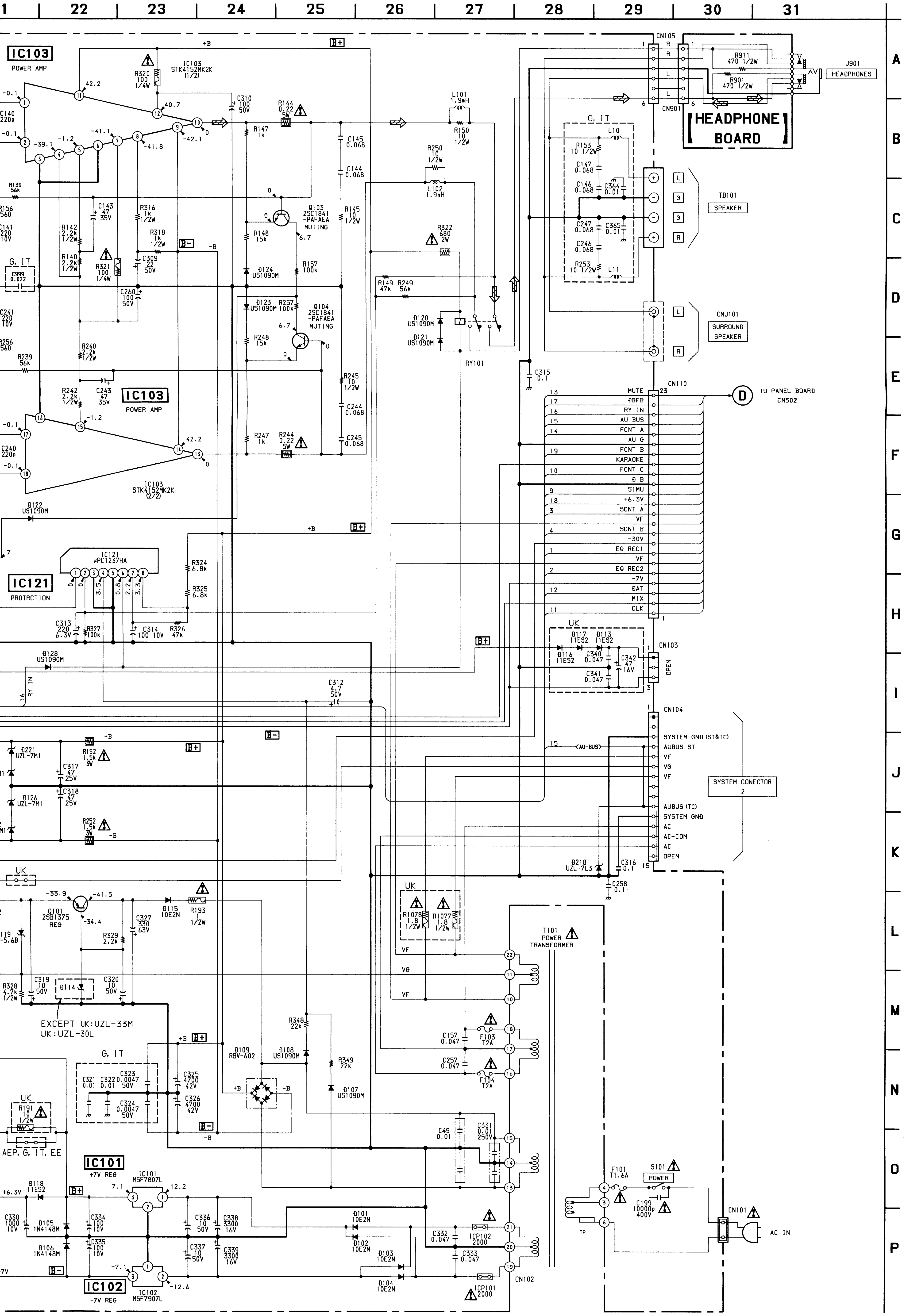

OUT2
VCC
OUT1
DRIVE CIRCUIT
INPUT LOGIC
IN1
GND
V CONT
IN2

2-3. SCHEMATIC DIAGRAMS – MAIN Section –



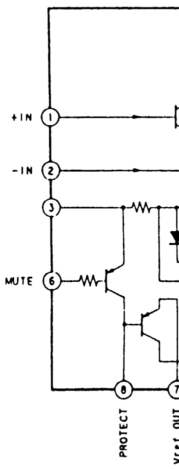
1
2
3
4
5
6
7
8
9
10
11
12
13
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
【MAIN BOARD】
CNJ103
PHONO IN
L
R
UK
G, IT
IC122
RIAA AMP
IC122 (1/2) NJM4580L
IC122 (2/2) NJM4580L
R101 1k
C101 2.2 50V
R102 1k
R103 100k
R203 100k
C108 220p
C208 220p
R202 1k
R201 1k
C201 2.2 50V
C102 100p
C202 100p
R104 100k
R105 680
R254 100k
R205 680
C109 68p
C209 68p
C103 47 16V
C203 47 16V
R107 560k
R106 47k
R206 47k
R207 560k
C105 0.0056
C104 0.0015
C204 0.0015
C205 0.0056
C106 0.22 50V
C206 0.22 50V
R108 1k
R208 1k
R109 220
R209 220
C107 47 16V
C207 47 16V
R120 100k
R220 100k
5.8
-5.9
+7V
-7V
B+
B-
IC104
INPUT SELECTER
IC104 MC14052BCP
R301 22k
R302 22k
FCNT A
FCNT B
C301 0.022
C303 0.022
IC105
INPUT SELECTER
IC105 MC14053BCP
R303 22k
R304 22k
FCNT C
SIMU
B MON
A PHONO
C
VDD
VEE
VSS
IC106
AUDIO AMP
IC106 (1/2) M5218AL
IC106 (2/2) M5218AL
R118 47k
R119 47k
C110 22p
C119 47 16V
C170 22 25V
C270 22 25V
C210 22p
R219 47k
R218 47k
C219 47 16V
7.1
-7.1
MIX O R
MIX O L
CNJ102
CD IN
R110 2.2k
C112 4.7 50V
C155 220p
C255 220p
R111 8.2k
R211 8.2k
R210 2.2k
C212 4.7 50V
VIDEO IN
R112 1k
C113 4.7 50V
C114 220p
C214 220p
R113 1M
R213 1M
R212 1k
C213 4.7 50V
CN106
SYSTEM CONECTOR 1
ST
TAPE
TAPE REC
L IN
A-G
R IN
L OUT
R OUT
R114 1k
R115 1k
R214 1k
R215 1k
R116 470
R216 470
C215 220p
C115 220p
R341 22k
R342 4.7k
EQREC1
EQREC2
AEP, G, IT, EE
R71 4.7k
R121 4.7k
R122 6.8k
R72 4.7k
R123 18k
R221 4.7k
R222 6.8k
R223 18k
IC110
REC LEVEL CONTROL
IC110 MC14052BCP
C305 0.022
C304 0.022
EFFECTED O R
EFFECTED O L
SURROUND
IC107
AUDIO AMP
C361 0.015
R124 2.2k
R352 47k
C116 22p
C118 10 50V
R126 10k
C117 0.001
R136 100k
R125 100k
R225 100k
C217 0.001
R305 10k
R236 100k
R226 10k
C362 0.047
R224 2.2k
C216 22p
C218 10 50V
IC108
SURROUND
IC108 MC14052BCP
R309 10k
R310 18k
R311 33k
SCNT A14
SCNT B19
R312 22k
R313 22k
C148 0.022
IC109
SIMULATED
IC109 MC14053BCP
R307 680
C306 0.027
R308 10k
C307 0.0033
C248 0.022
CN181
L-IN
G
R-IN
L-OUT
+7V
R-OUT
-7V
KARAOKE
DAT
CLK
CN191
18
12
11
17
13
DBFB
MUTE
+15V
-15V
TO VOLUME BOARD CN603
B
CN109
TO PANEL BOARD CN609
A
CN113
R876 1k
Q853 2SA1346 SWITCH
14.4
14.3
-14.3
R871 22k
R870 220k
Q855 2SK246-Y DBFB ON/OFF
-13.7
D862 1N4148M
Q857 2SK246-Y DBFB ON/OFF
D863 1N4148M
-0.1
IC855 (1/2) M5218AL
IC855 (2/2) M5218AL
IC855
DBFB AMP
R851 1k
R862 100k
R852 100k
R861 1k
C861 0.82
R853 4.7k
C853 68p
C851 0.82
R857 1.2k
R863 4.7k
C863 68p
C852 0.082
R858 56k
Q856 2SC2603-EF FILTER AMP
R855 390
C857 10 50V
R854 4.7k
6.3
-0.4
-1
Q854 2SA1115-EF MUTING
0.3
Q859 2SC3622A-LK MUTING
-13.6
R859 10k
C854 22 25V
C856 0.47 50V
R860 10k
C855 22 25V
R410 33k
R412 5.6k
R411 33k
R865 390
R864 4.7k
C867 10 50V
Q858 2SC2603-EF FILTER AMP
C862 0.082
R867 1.2k
R868 56k
Q860 2SC3622A-LK MUTING
R869 10k
C866 0.47 50V
R878 220k
C865 22 25V
R872 3.3k
R873 3.3k
C880 100 10V


12
13
14
15
16
17
18
19
20
21
22
23
24
【GEQ BOARD】
TO VOLUME BOARD CN602
C
CN107
R-CH
VOL-G
L-CH
IC103
POWER AMP
IC103 STK4152MK2K (1/2)
IC103 STK4152MK2K (2/2)
R320 100 1/4W
C310 100 50V
R147 1k
C138 10 50V
R137 1k
C140 220p
C141 220 10V
R139 56k
R138 56k
R156 560
R142 2.2k 1/2W
R140 2.2k 1/2W
C143 47 35V
R321 100 1/4W
R316 1k 1/2W
R318 1k 1/2W
C309 22 50V
C139 100p
G. IT
C999 0.022
C260 100 50V
R148 15k
D124 US1090
D123 US1090
R248 15k
C241 220 10V
R238 56k
R256 560
R239 56k
R240 2.2k 1/2W
C239 100p
R242 2.2k 1/2W
C243 47 35V
C240 220p
C238 10 50V
R237 1k
R247 1k
IC106 (1/2) M5218AL
IC106 (2/2) M5218AL
IC106
AUDIO AMP
R119 47k
C119 47 16V
C110 22p
C210 22p
R219 47k
C219 47 16V
C118 10 50V
R136 100k
R305 10k
R236 100k
C362 0.047
C218 10 50V
R307 0.0033
R410 33k
R412 5.6k
R411 33k
IC111
GEQ
IC111 M5289P
C121 10 50V
R135 7.5
C122 220p
R134 1M
R133 1M
C136 0.47 50V
C137 22p
C134 1 50V
C135 0.027
C133 0.068
C124 270p
C126 680p
C128 0.0018
C130 0.0039
C132 0.01
C125 0.012
C127 0.033
C129 0.068
C123 0.0047
C131 0.18
R132 1M
R128 1M
R129 1M
R130 1M
R131 1M
R127 7.5
C120 47 16V
C210 47 16V
CN181
CN191
L-IN
G
R-IN
L-OUT
+7V
R-OUT
-7V
KARAOKE
DAT
CLK
R227 7.5k
IC112
ELECTRONIC VOLUME
IC112 LC7522K
R314 1k
R315 1k
C351 0.1
C352 22 25V
R346 4.7k
D127 UZL-6L3
C375 0.1
R399 100
C308 0.1
C221 10 50V
C222 220p
R235 7.5
R234 1M
R233 1M
C225 0.012
C237 22p
C223 0.047
C226 680p
C224 270p
IC113
GEQ
IC113 M5289P
C233 0.068
C235 0.027
C232 0.01
C230 0.0039
C228 0.0018
C234 1 50V
C236 0.47 50V
C231 0.18
C229 0.068
C277 0.033
R232 1M
R228 1M
R229 1M
R230 1M
R231 1M
B+
B-
D122 US1090M
Q102 2SA1346 SWITCH
R323 10k
IC121 μPC1237HA
IC121
PROTRCTION
R324 6.8k
R325 6.8k
C311 220 6.3V
C313 220 6.3V
R327 100k
C314 100 10V
R326 47k
D128 US1090M
RY IN
D221 UZL-7M1
D125 UZL-7M1
R152 1.5k 3W
C317 47 25V
C318 47 25V
D126 UZL-7M1
D222 UZL-7M1
R252 1.5k 3W
UK
Q101 2SB1375 REG
D115 10E2N
R193 1 1/2W
C302 10 50V
D119 UZP-5.6B
C327 330 63V
R329 2.2k
R328 4.7k 1/2W
C319 10 50V
D114
C320 10 50V
EXCEPT UK:UZL-33M
UK:UZL-30L
D109 RBV-602
G. IT
C321 0.01
C322 0.01
C323 0.0047 50V
C324 0.0047 50V
C325 4700 42V
C326 4700 42V
R191 10 1/2W
AEP, G, IT, EE
IC101
+7V REG
IC101 M5F7807L
D118 11ES2
C330 1000 10V
D105 1N4148M
D106 1N4148M
C334 100 10V
C335 100 10V
C336 10 50V
C338 3300 16V
C337 10 50V
C339 3300 16V
R192 10 1/2W
IC102
-7V REG
IC102 M5F7907L



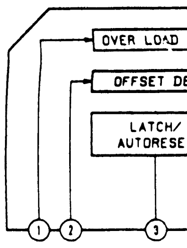
21
22
23
24
25
26
27
28
29
30
31
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
IC103
POWER AMP
IC103 STK4152MK2K (1/2)
IC103 STK4152MK2K (2/2)
IC121
PROTRACTION
IC121 μPC1237HA
IC101
+7V REG
IC101 M5F7807L
IC102
-7V REG
IC102 M5F7907L
Q103 2SC1841 -PAFAEA MUTING
Q104 2SC1841 -PAFAEA MUTING
Q101 2SB1375 REG
HEADPHONE BOARD
J901
HEADPHONES
CN105
CN901
R911 470 1/2W
R901 470 1/2W
TB101
SPEAKER
CNJ101
SURROUND SPEAKER
RY101
CN110
TO PANEL BOARD CN502
MUTE
ΘBFB
RY IN
AU BUS
FCNT A
AU G
FCNT B
KARAOKE
FCNT C
Θ B
SIMU
+6.3V
SCNT A
VF
SCNT B
-30V
EQ REC1
EQ REC2
-7V
ΘAT
MIX
CLK
CN103
OPEN
CN104
SYSTEM GND (ST&TC)
AUBUS ST
VG
AUBUS (TC)
SYSTEM GND
AC
AC-COM
OPEN
SYSTEM CONECTOR 2
T101 POWER TRANSFORMER
F101 T1.6A
S101 POWER
C199 10000p 400V
CN101
AC IN
CN102
F103 T2A
F104 T2A
ICP101 2000
ICP102 2000
D109 RBV-602
EXCEPT UK:UZL-33M
UK:UZL-30L
G, IT
UK
AEP, G, IT, EE
L101 1.9mH
L102 1.9mH
R144 0.22 5W
R244 0.22 5W
R320 100 1/4W
R321 100 1/4W
R322 680 2W
R193 1 1/2W
R1078 1.8 1/2W
R1077 1.8 1/2W
R191 10 1/2W
C325 4700 42V
C326 4700 42V
C338 3300 16V
C339 3300 16V
C330 1000 10V
C331 0.01 250V
TP

IC103 STK4



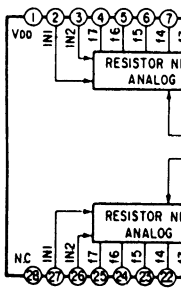
+IN
-IN
MUTE
PROTECT

IC121 μPC12



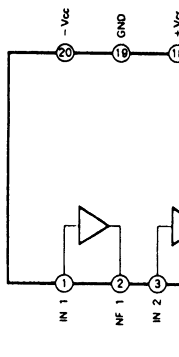
OVER LOAD
OFFSET DE
LATCH/ AUTORESE

IC112 LC752



VDD
IN1
RESISTOR NE ANALOG
RESISTOR NE ANALOG
NC
IN2

IC113 M528



-Vcc
GND
IN 1
NF 1
IN 2

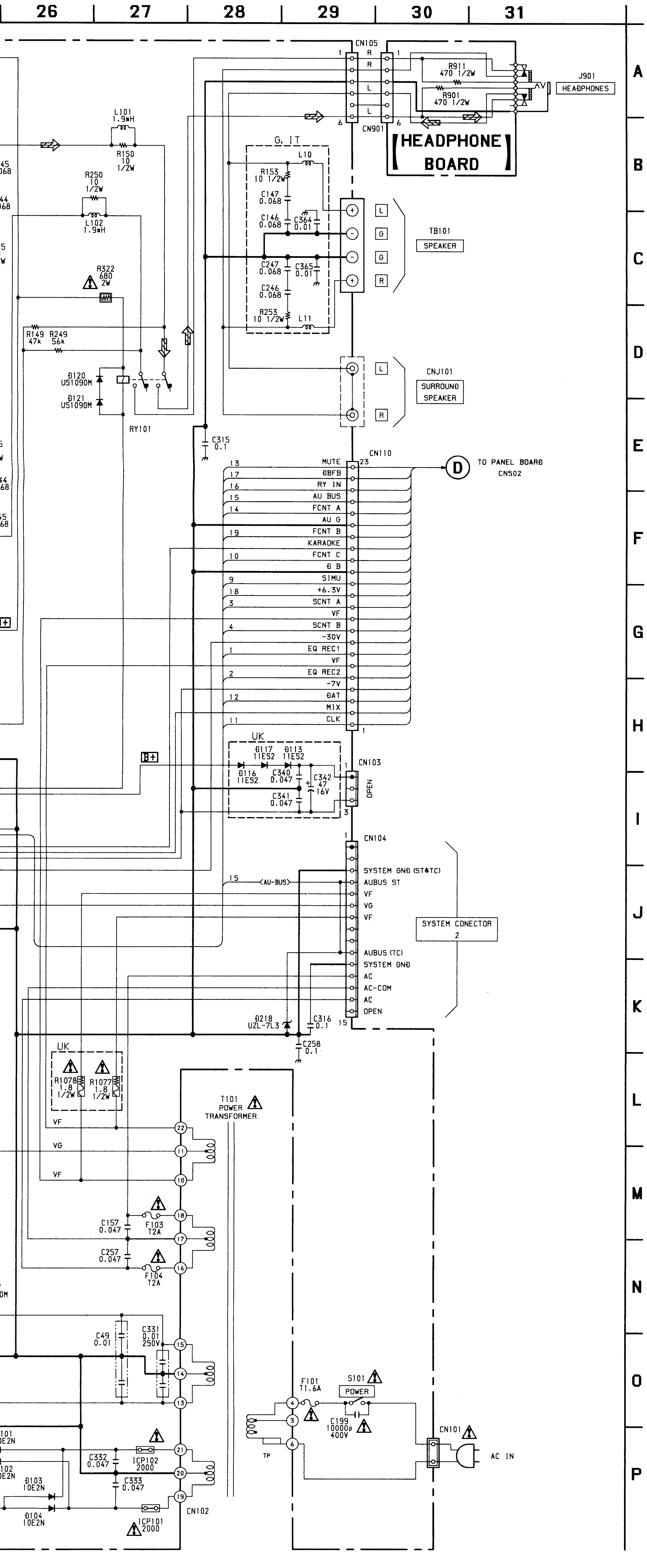
Note:

- All capacitors a
50WV or less
and tantalums.
- All resistors ar
specified.
- △ : interna
- ▭ : nonflar
- ▭ : fusible
- ▭ : printed
- B+ : B+ Line
- B− : B– Line
- ▭ : adjustm
- ※ : selected
- AC voltage rea
- Total current is
- Power voltage i
supply from ext
- Voltage and w
under no-signal
- Voltages are tak
Voltage variatio
tion tolerances.
- Circled number
- Signal path.
⇨ : CD

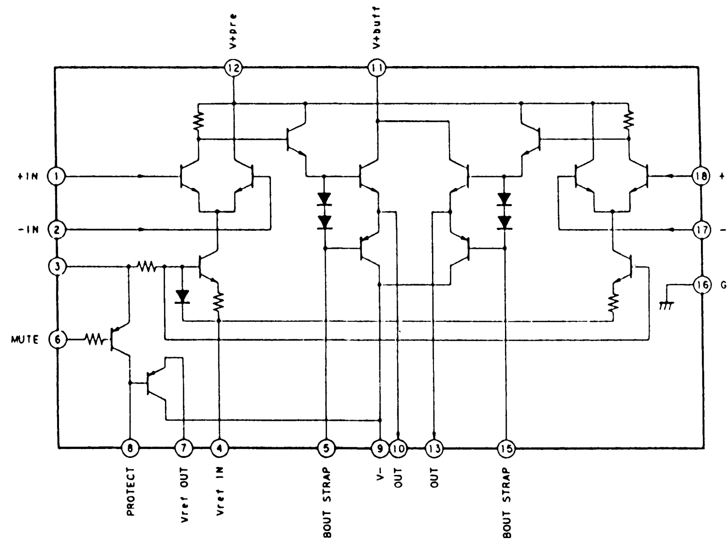
G : Germany

IT : Italian

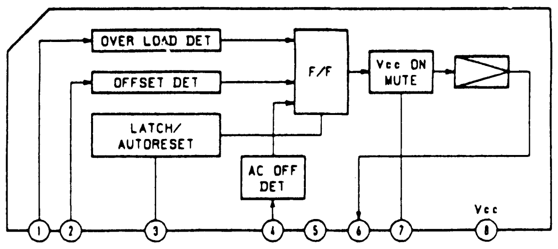
EE : East European


26
27
28
29
30
31
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
CN105
CN901
R911 470 1/2W
R901 470 1/2W
J901 HEADPHONES
HEADPHONE BOARD
L101 1.9mH
R150 10 1/2W
R250 10 1/2W
L102 1.9mH
R322 680 2W
G, IT
R153 10 1/2W
L10
C147 0.068
C146 0.068
C364 0.01
C247 0.068
C365 0.01
C246 0.068
R253 10 1/2W
L11
TB101 SPEAKER
CNJ101 SURROUND SPEAKER
R149 47k
R249 56k
D120 US1090M
D121 US1090M
RY101
C315 0.1
CN110
TO PANEL BOARD CN502
MUTE
DBFB
RY IN
AU BUS
FCNT A
AU G
FCNT B
KARAOKE
FCNT C
D B
SIMU
+6.3V
SCNT A
VF
SCNT B
-30V
EQ REC1
EQ REC2
-7V
DAT
MIX
CLK
UK
D117 11ES2
D113 11ES2
D116 11ES2
C340 0.047
C342 47 16V
C341 0.047
CN103
OPEN
B+
CN104
SYSTEM GND (ST&TC)
AUBUS ST
VF
VG
AUBUS (TC)
SYSTEM GND
AC
AC-COM
OPEN
SYSTEM CONECTOR 2
<AU-BUS>
D218 UZL-7L3
C316 0.1
C258 0.1
R1078 1.8 1/2W
R1077 1.8 1/2W
T101 POWER TRANSFORMER
C157 0.047
F103 T2A
C257 0.047
F104 T2A
C49 0.01
C331 0.01 250V
F101 T1.6A
S101 POWER
C199 10000p 400V
CN101
AC IN
TP
C332 0.047
ICP102 2000
C333 0.047
D103 10E2N
D104 10E2N
ICP101 2000
CN102

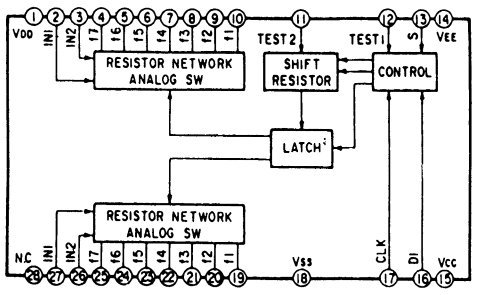
IC103 STK4152MK2K


Vspre
Vsbuff
+IN
-IN
MUTE
+IN
-IN
GND
PROTECT
Vref OUT
Vref IN
BOUT STRAP
V-
OUT
OUT
BOUT STRAP

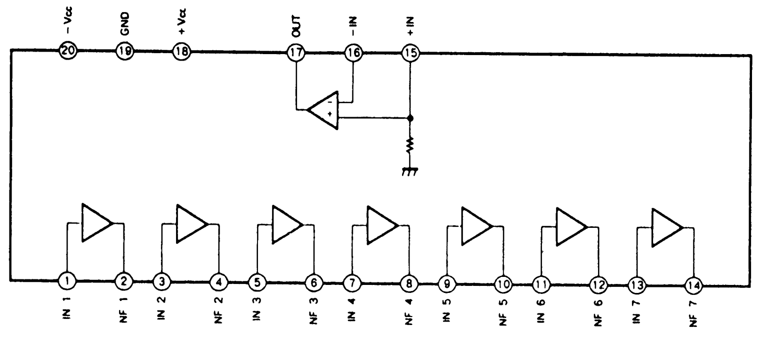
IC121 μPC1237HA


OVER LOAD DET
OFFSET DET
LATCH/ AUTORESET
F/F
Vcc ON MUTE
AC OFF DET
Vcc

IC112 LC7522K


VDD
TEST2
TEST1
VEE
RESISTOR NETWORK ANALOG SW
SHIFT RESISTOR
CONTROL
LATCH
RESISTOR NETWORK ANALOG SW
NC
VSS
CLK
DI
Vcc

IC113 M5289P


-Vcc
GND
+Vcc
OUT
-IN
+IN
IN 1
NF 1
IN 2
NF 2
IN 3
NF 3
IN 4
NF 4
IN 5
NF 5
IN 6
NF 6
IN 7
NF 7

Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $^1/_4$W or less unless otherwise specified.
- △ : internal component.
- ▨ : nonflammable resistor.
- —ww~— : fusible resistor.
- —ww— : printed resistor.
- B+ : B+ Line
- B– : B– Line
- ☐ : adjustment for repair.
- ※ : selected to yield optimum performance.
- AC voltage readings in the bias oscillator with a VTVM.
- Total current is measured with no cassette installed.
- Power voltage is dc V and fed with regulated dc power supply from external power voltage jack.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.

  ➾ : CD

G: Germany

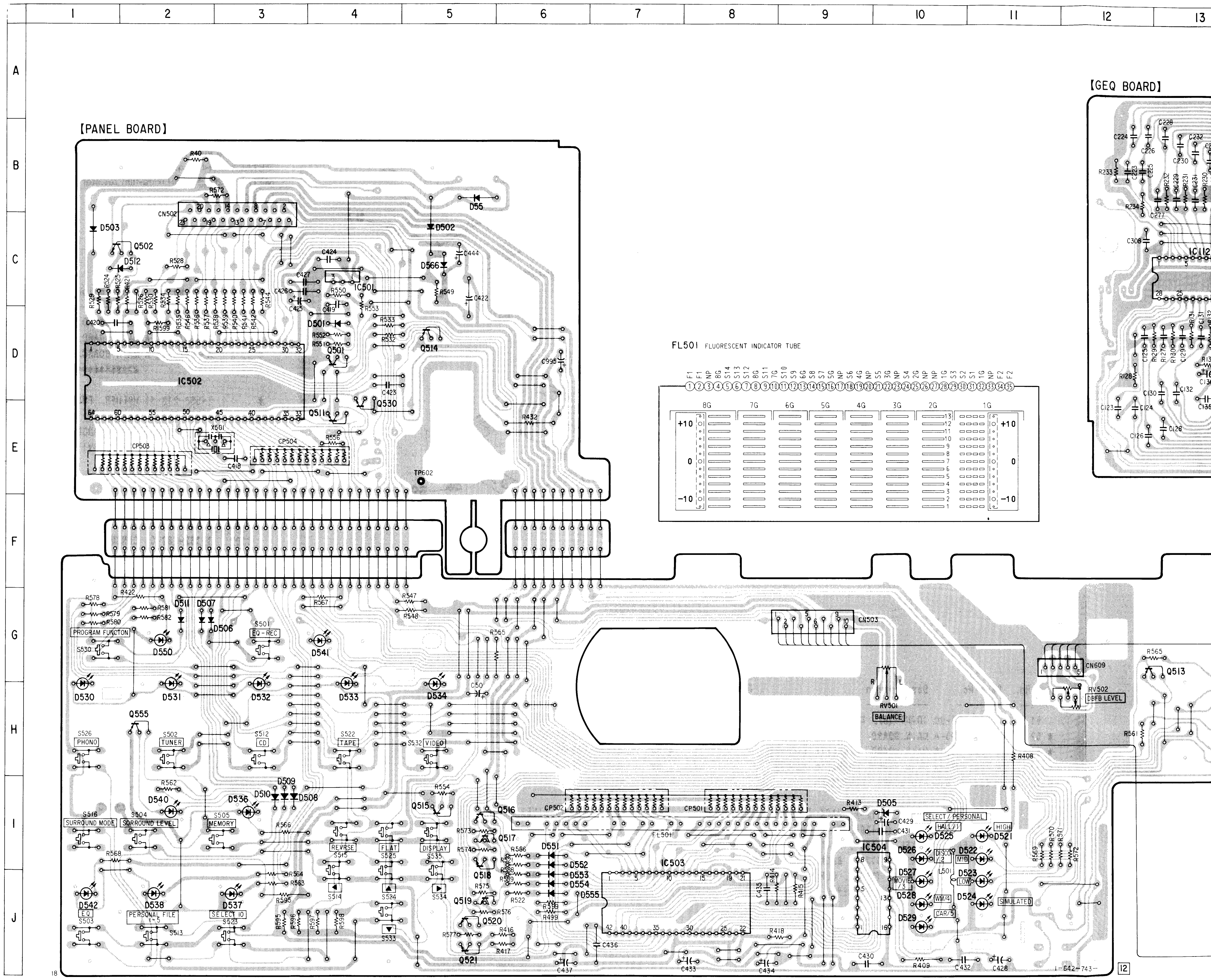
IT: Italian

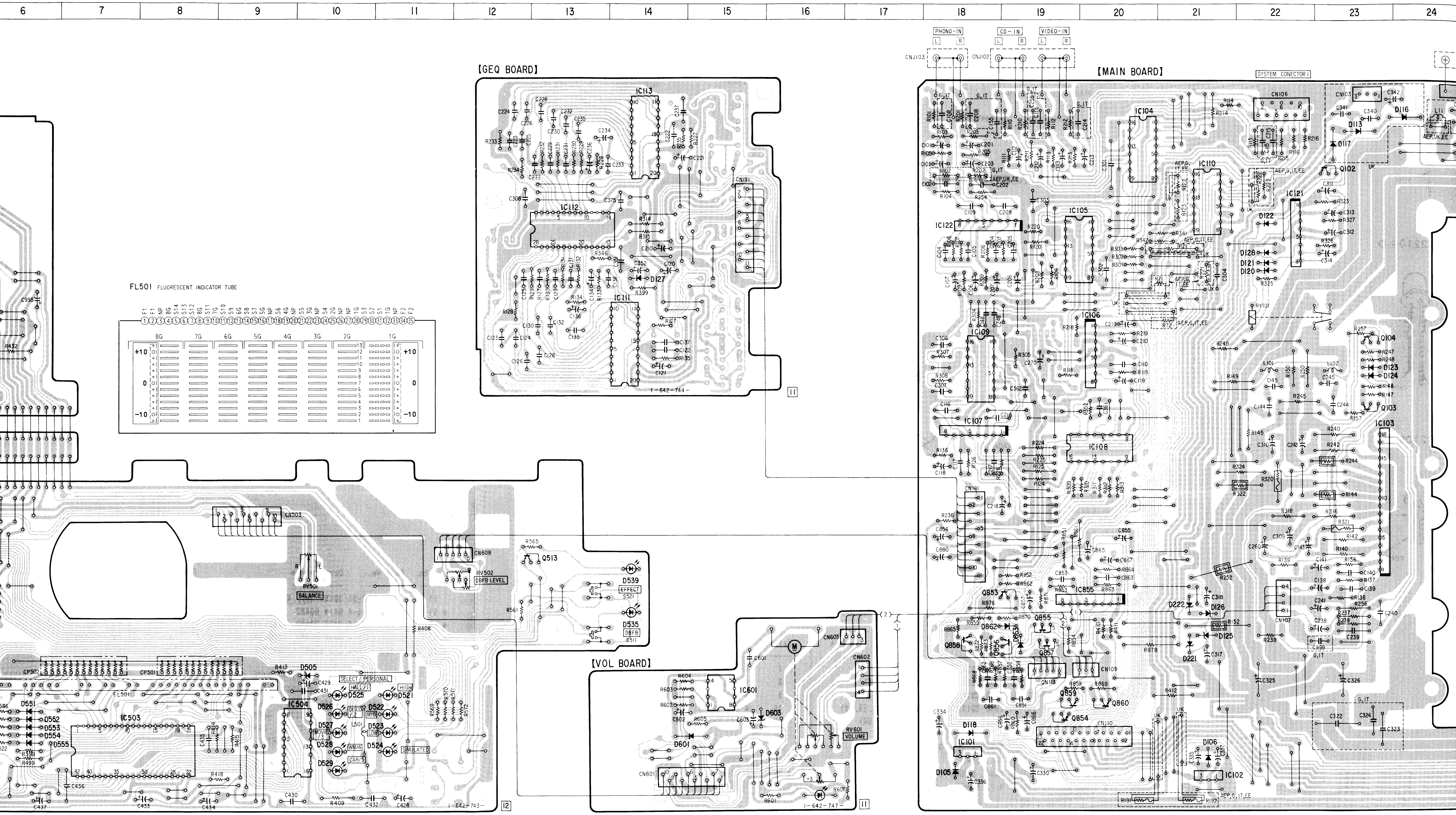
EE: East European

- **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D55	B-5	D537	J-3	Q853	H-19
D101	G-27	D538	J-2	Q854	I-19
D102	G-27	D539	G-14	Q855	H-19
D103	G-27	D540	I-2	Q856	H-18
D104	H-27	D541	G-2	Q857	H-19
D105	J-18	D542	J-2	Q858	H-18
D106	J-21	D550	G-2	Q859	I-19
D107	J-28	D551	I-6	Q860	I-19
D108	J-28	D552	I-6		
D109	J-28	D553	I-6		
D113	B-23	D554	J-6		
D114	G-30	D555	J-6		
D115	H-30	D566	C-5		
D116	B-24	D601	J-14		
D117	B-23	D603	J-15		
D118	J-18	D862	H-19		
D119	H-29	D863	H-19		
D120	D-22				
D121	D-22	IC101	J-18		
D122	C-22	IC102	J-21		
D123	E-23	IC103	F-23		
D124	E-23	IC104	B-20		
D125	H-21	IC105	C-19		
D126	H-21	IC106	E-20		
D127	D-14	IC107	F-18		
D128	C-22	IC108	F-20		
D218	B-26	IC109	E-18		
D221	H-21	IC110	C-21		
D222	H-21	IC111	E-14		
D501	D-4	IC112	C-13		
D502	C-5	IC113	B-14		
D503	C-1	IC121	C-22		
D505	I-10	IC122	C-18		
D506	G-2	IC501	C-4		
D507	G-2	IC502	D-2		
D508	I-3	IC503	J-7		
D509	I-3	IC504	J-10		
D510	I-3	IC601	I-15		
D511	G-2	IC855	H-20		
D512	C-1				
D521	I-11	Q101	G-29		
D522	I-11	Q102	B-23		
D523	J-11	Q103	E-23		
D524	J-11	Q104	E-23		
D525	I-10	Q511	E-4		
D526	I-10	Q513	G-13		
D527	J-10	Q514	D-5		
D528	J-10	Q515	I-5		
D529	J-10	Q516	I-5		
D530	G-1	Q517	I-5		
D531	G-2	Q518	I-5		
D532	G-3	Q519	J-5		
D533	G-4	Q520	J-5		
D534	G-5	Q521	J-5		
D535	H-14	Q530	D-4		
D536	I-3	Q555	H-2		

2-4. PRINTED WIRING BOARDS


1
2
3
4
5
6
7
8
9
10
11
12
13
A
B
C
D
E
F
G
H
I
J
[PANEL BOARD]
[GEQ BOARD]
FL501 FLUORESCENT INDICATOR TUBE
8G
7G
6G
5G
4G
3G
2G
1G
+10
0
-10
CN502
IC502
IC501
IC503
IC504
CN503
CN609
CP502
CP501
CP503
CP504
TP602
X501
RV501
BALANCE
RV502
DBFB LEVEL
PROGRAM FUNCTON
S530
EQ-REC
S501
PHONO
S526
TUNER
S502
CD
S512
TAPE
S522
S532 VIDEO
SURROUND MODE
S516
SURROUND LEVEL
S504
MEMORY
S505
REVRSE
S515
FLAT
S525
DISPLAY
S535
S514
S524
S534
S533
E.Q.
S503
PERSONAL FILE 1~5
S513
SELECT IO
S523
SELECT / PERSONAL
HALL/1
HIGH
DISCO/2
MID
MOVIE/3
LOW
WM/4
CAR/5
SIMULATED
D55
D501
D502
D503
D505
D506
D507
D508
D509
D510
D511
D512
D521
D522
D523
D524
D525
D526
D527
D528
D529
D530
D531
D532
D533
D534
D536
D537
D538
D540
D541
D542
D550
D551
D552
D553
D554
D555
D566
Q501
Q502
Q511
Q513
Q514
Q515
Q516
Q517
Q518
Q519
Q520
Q521
Q530
Q555
1-642-743-


6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
【GEQ BOARD】
【MAIN BOARD】
【VOL BOARD】
PHONO-IN
CD-IN
VIDEO-IN
L
R
CNJ103
CNJ102
SYSTEM CONECTOR
FL501 FLUORESCENT INDICATOR TUBE
8G
7G
6G
5G
4G
3G
2G
1G
+10
0
−10
IC113
IC112
IC111
CN191
IC104
IC110
IC121
IC105
IC122
IC106
IC109
IC107
IC108
IC103
CN161
IC855
CN107
CN106
CN103
CN109
CN113
CN110
IC101
IC102
RY101
CN503
CN609
CN603
CN602
CN601
IC601
IC503
IC504
CP502
CP501
FL501
RV501
BALANCE
RV502
DBFB LEVEL
Q513
D539
EFFECT
S521
D535
DBFB
S511
SELECT/PERSONAL
HALL/1
HIGH
DISCO/2
MID
MOVIE/3
LOW
WM/4
CAR/5
SIMULATED
RV601
VOLUME
M
1-642-744-
1-642-743-
1-642-747-
11
12
G,IT
AEP,UK,EE
AEP,G,IT,EE
UK

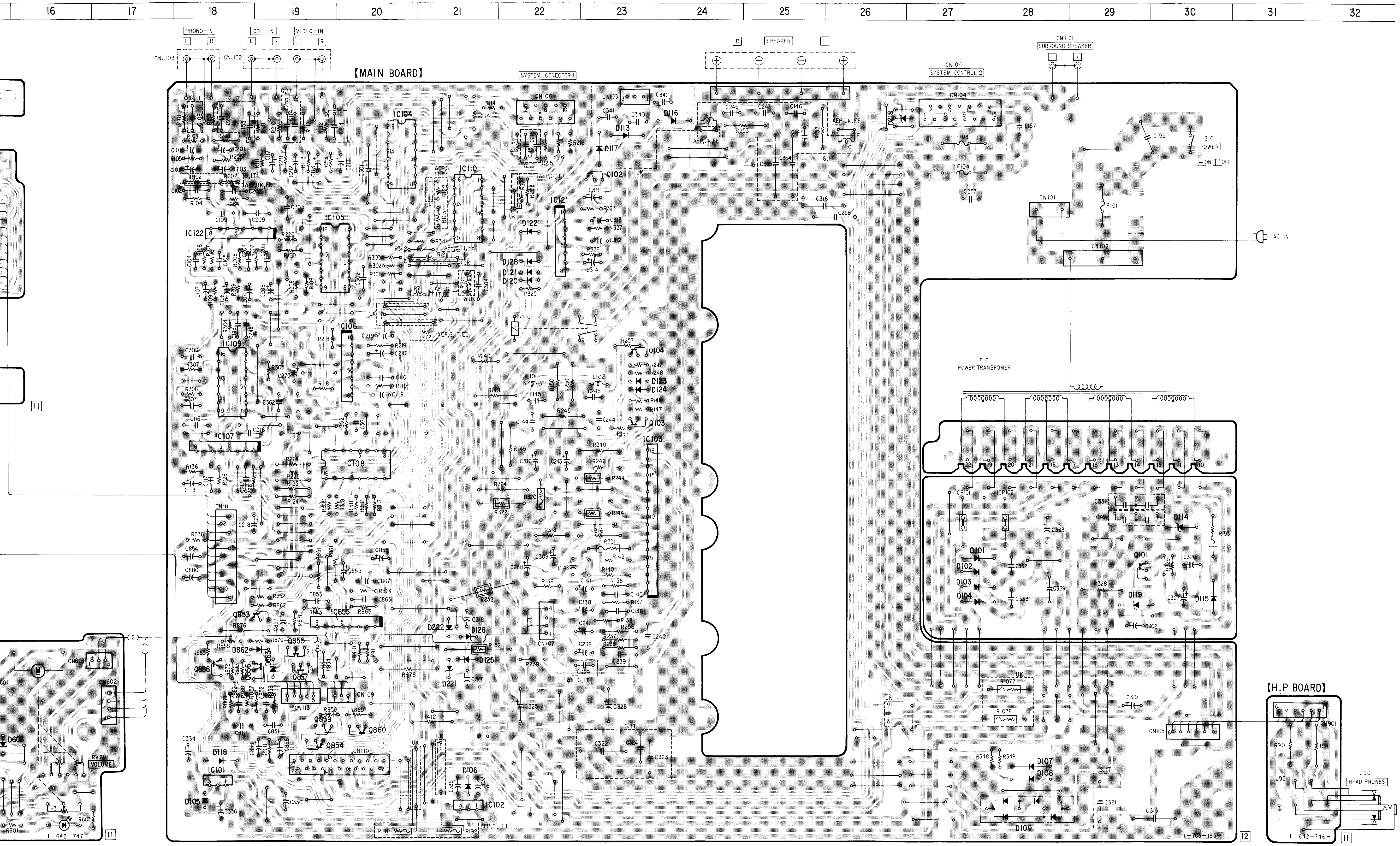
Note:

- ○—— : parts extracted from the component side.

G: Germany

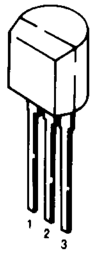
IT: Italian

EE: East European

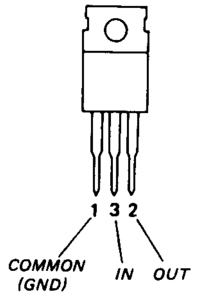

16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
【MAIN BOARD】
PHONO-IN
CD-IN
VIDEO-IN
CNJ103
CNJ102
SYSTEM CONECTOR 1
SPEAKER
R
L
CNJ101
SURROUND SPEAKER
CN104
SYSTEM CONTROL 2
S101
POWER
ON
OFF
AC IN
T101
POWER TRANSFOMER
IC104
IC110
IC105
IC121
IC122
IC106
IC109
IC107
IC108
IC103
IC855
IC101
IC102
CN106
CN104
CN101
CN102
CN107
CN109
CN110
CN113
CN181
CN105
RY101
RV601
VOLUME
CN603
CN602
D109
【H.P BOARD】
CN901
J901
HEAD PHONES
1-705-185-
1-642-747-
1-642-746-
AEP,UK,EE
AEP,G,IT,EE
G,IT
UK

2-5. SEMICONDUCTOR LEAD LAYOUT

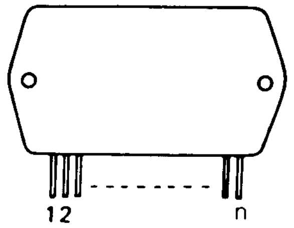
M51943BSL



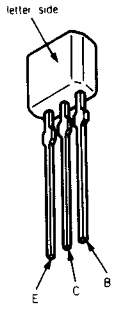
M5F7907


1 3 2
COMMON (GND)
IN
OUT

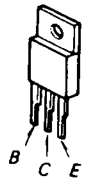
STK-4152MK2K



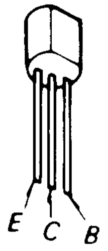
2SA1175-HFE


letter side
E
C
B

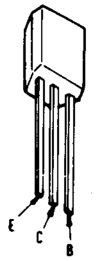
2SB1094-LK



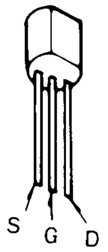
2SC1841-PAFAEA



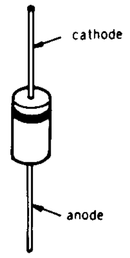
2SC2603-EF
2SC3622A-LK
DTA-124ES
DTC-124ES



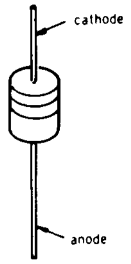
2SK246-Y



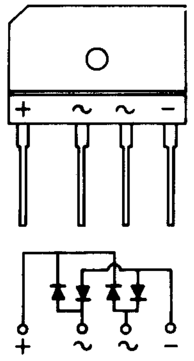
10E2N
1N4148M
1S1585


cathode
anode

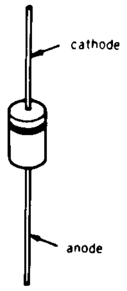
11ES2
HZL-7M1
HZS33-2L
HZS6AIL


cathode
anode

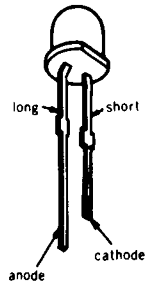
RBV-602-01



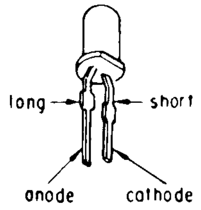
UZL-6L3
UZL-6M2
UZL-7L3
UZP-5.6B


cathode
anode

SEL2210S-D


long
short
anode
cathode

SEL3210S-CD

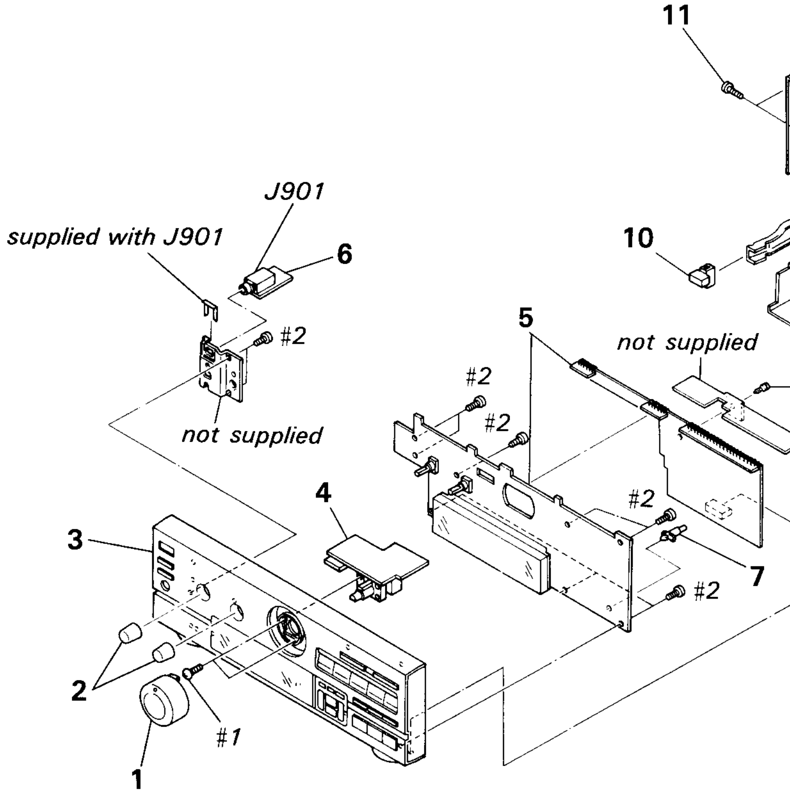

long
short
anode
cathode

SECTION 3
EXPLODED VIE

NOTE:
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE(WHITE)...(RED)
  ↑ ↑
  Parts color Cabinet's color

- Items marked " ∗ " are not since they are seldom requi routine service. Some delay anticipated when ordering th
- The mechanical parts with n number in the exploded view supplied.
- hardware (#mark) list is given last of this parts list.

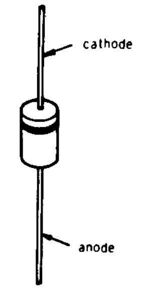
3-1. CABINET SECTION


11
supplied with J901
J901
6
10
#2
5
not supplied
#2
#2
not supplied
4
#2
3
7
#2
2
#1
1

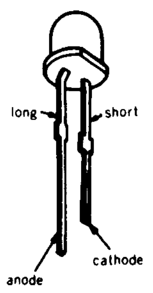
Ref. No.	Part No.	Description	Remark
1	X-4942-417-1	KNOB ASSY, ROUND (IT)	
1	X-4942-418-1	KNOB ASSY, ROUND (AEP, G, EE, UK)	
2	4-950-651-01	KNOB (DIA. 16), ROUND (IT)	
2	4-950-651-11	KNOB (DIA. 16), ROUND (AEP, G, EE, UK)	
3	X-4942-431-1	PANEL ASSY, FRONT (AEP, G, EE, UK)	
3	X-4942-433-1	PANEL ASSY, FRONT (IT)	
∗ 4	1-642-747-11	VOL BOARD	
∗ 5	A-4347-275-A	PANEL BOARD, COMPLETE	
∗ 6	1-642-746-11	H. P. BOARD	

Ref. No
∗ 7
8
9
10
10
11
∗ 12
∗ 12
J901

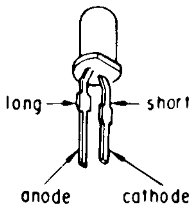
UZL-6L3
UZL-6M2
UZL-7L3
UZP-5.6B


cathode
anode

SEL2210S-D


long
short
anode
cathode

SEL3210S-CD


long
short
anode
cathode

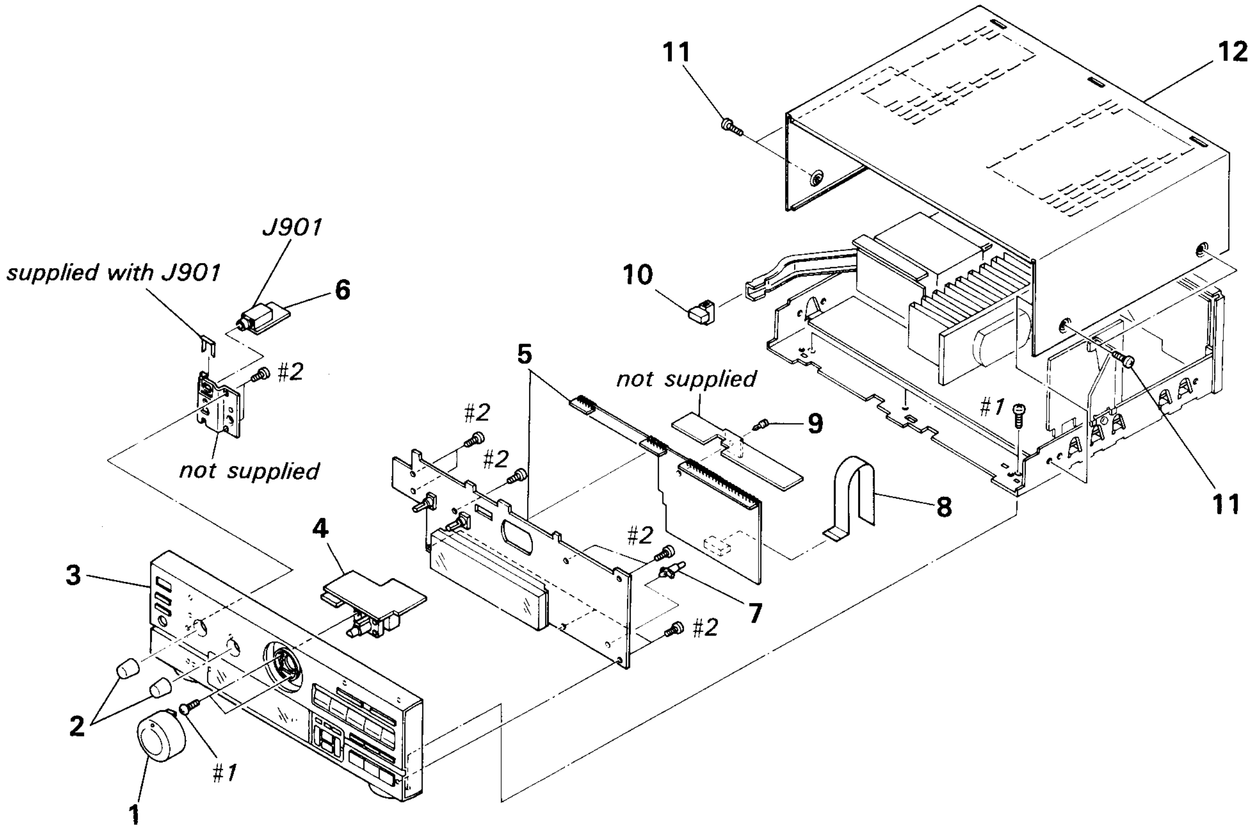
SECTION 3
EXPLODED VIEWS

NOTE:
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts Example:
  KNOB, BALANCE(WHITE)...(RED)
  ↑ Parts color ↑ Cabinet's color
- Items marked " ∗ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- hardware (#mark) list is given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

G: Germany
IT: Italian
EE: East European

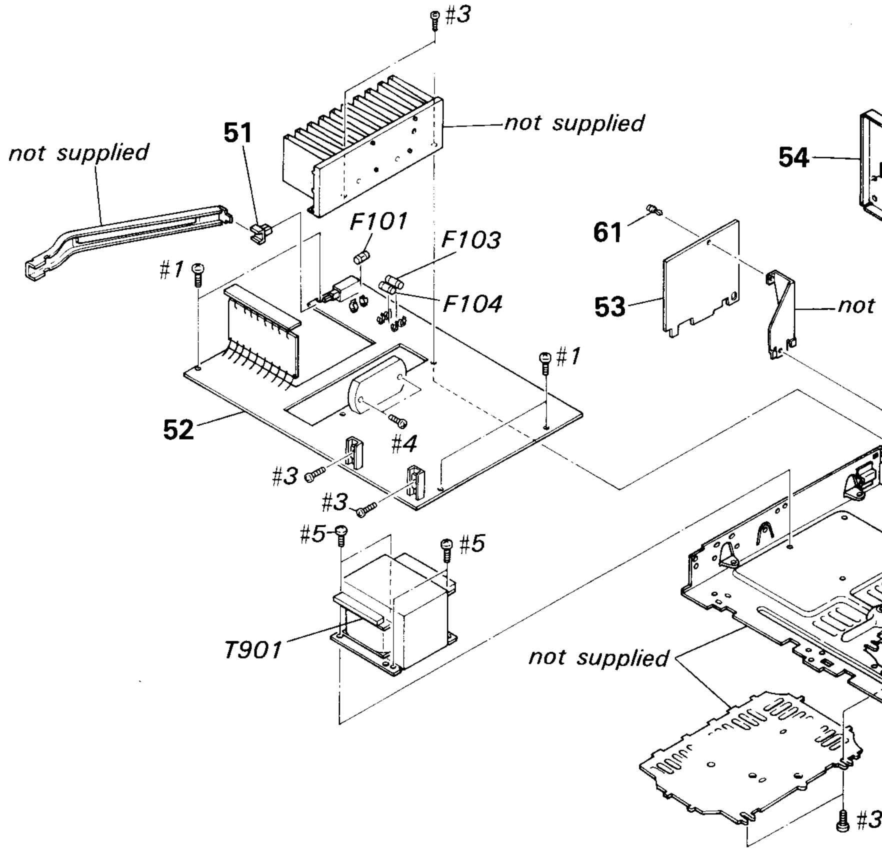
3-1. CABINET SECTION


11
12
J901
supplied with J901
6
#2
10
5
not supplied
9
#1
#2
#2
not supplied
11
8
4
#2
7
3
#2
2
#1
1

Ref. No.	Part No.	Description	Remark
1	X-4942-417-1	KNOB ASSY, ROUND (IT)	
1	X-4942-418-1	KNOB ASSY, ROUND (AEP, G, EE, UK)	
2	4-950-651-01	KNOB (DIA. 16), ROUND (IT)	
2	4-950-651-11	KNOB (DIA. 16), ROUND (AEP, G, EE, UK)	
3	X-4942-431-1	PANEL ASSY, FRONT (AEP, G, EE, UK)	
3	X-4942-433-1	PANEL ASSY, FRONT (IT)	
∗ 4	1-642-747-11	VOL BOARD	
∗ 5	A-4347-275-A	PANEL BOARD, COMPLETE	
∗ 6	1-642-746-11	H.P. BOARD	

Ref. No.	Part No.	Description	Remark
∗ 7	4-924-098-31	HOLDER, PC BOARD	
8	1-690-697-11	WIRE (FLAT TYPE) (23 CORE)	
9	4-812-134-11	RIVET NYLON, 3.5	
10	4-942-061-01	BUTTON (P) (IT)	
10	4-942-061-11	BUTTON (P) (AEP, G, EE, UK)	
11	3-363-099-01	SCREW (CASE +3X8 TP2)	
∗ 12	4-939-803-91	CASE (IT)	
∗ 12	4-949-912-11	CASE (AEP, G, EE, UK)	
J901	1-507-854-00	JACK, PHONE	

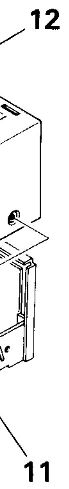
3-2. MAIN BOARD SECTION


#3
not supplied
51
not supplied
54
F101
F103
61
#1
F104
53
not
#1
52
#4
#3
#3
#5
#5
T901
not supplied
#3

Ref. No.	Part No.	Description	Remark
51	4-866-342-00	JOINT (B), KNOB	
∗ 52	A-4347-265-A	MAIN BOARD, COMPLETE (UK)	
∗ 52	A-4347-266-A	MAIN BOARD, COMPLETE (AEP, EE)	
∗ 52	A-4347-272-A	MAIN BOARD, COMPLETE (G, IT)	
∗ 53	A-4347-276-A	GEQ BOARD, COMPLETE	
∗ 54	4-950-662-11	PANEL (B3120), BACK (AEP, EE)	
∗ 54	4-950-662-21	PANEL (B3120), BACK (UK)	
∗ 54	4-950-662-41	PANEL (B3120), BACK (G)	
∗ 54	4-950-662-51	PANEL (B3120), BACK (IT)	
∗ 55	3-703-244-00	BUSHING (2104), CORD	
⚠ 56	1-575-654-11	CORD, POWER (AEP, G, IT, EE)	

Ref. No.	Part No.
⚠ 56	1-575-669-
57	4-947-010-
∗ 58	4-949-235-
59	4-931-169-
∗ 60	4-932-867-
61	4-812-134-
⚠ F101	1-532-259-
⚠ F103	1-532-203-
⚠ F104	1-532-203-
⚠ T901	1-450-812-

ts identified by
ed line with mark
r safety.
ith part number

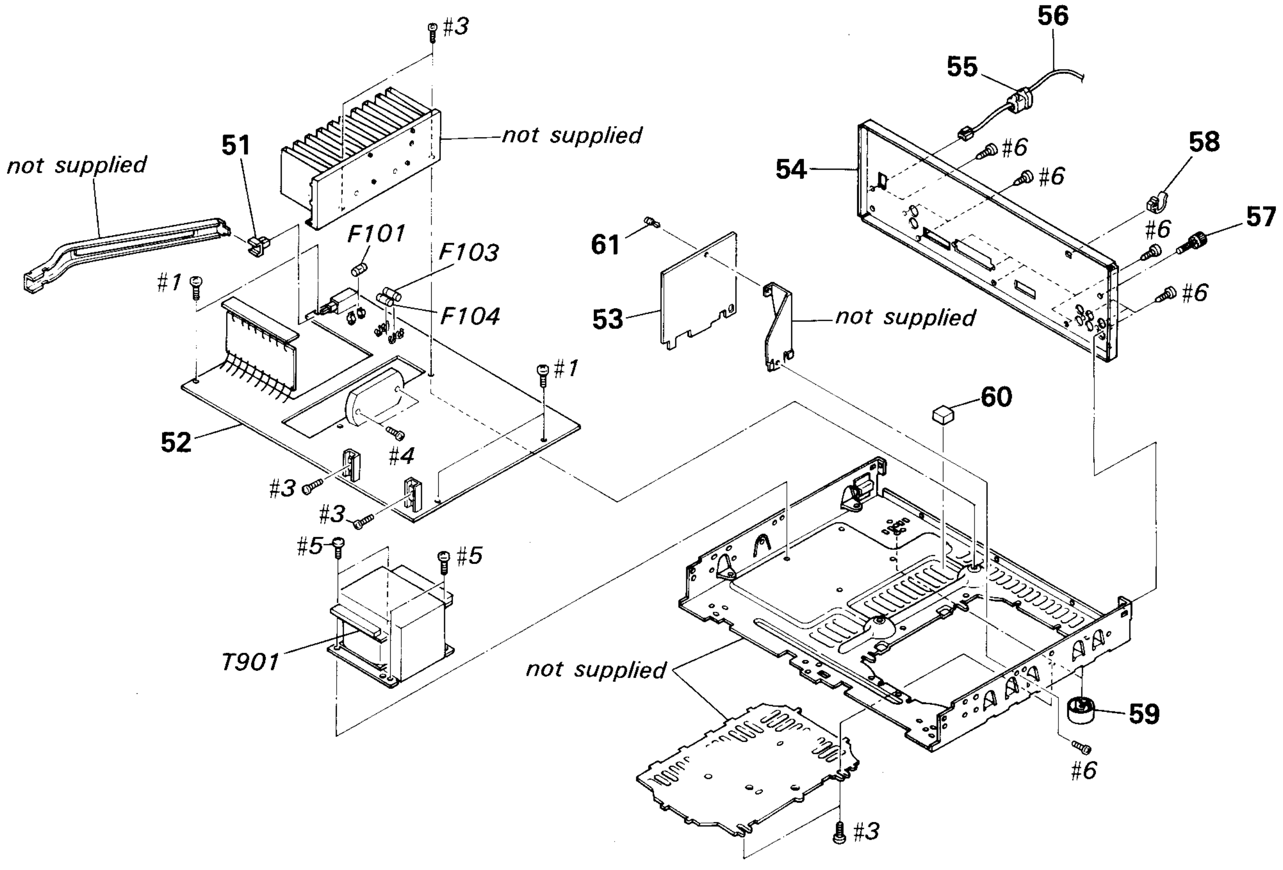


Remark

RE)

)

3-2. MAIN BOARD SECTION



Ref. No.	Part No.	Description	Remark
51	4-866-342-00	JOINT (B), KNOB	
* 52	A-4347-265-A	MAIN BOARD, COMPLETE (UK)	
* 52	A-4347-266-A	MAIN BOARD, COMPLETE (AEP, EE)	
* 52	A-4347-272-A	MAIN BOARD, COMPLETE (G, IT)	
* 53	A-4347-276-A	GEQ BOARD, COMPLETE	
* 54	4-950-662-11	PANEL (B3120), BACK (AEP, EE)	
* 54	4-950-662-21	PANEL (B3120), BACK (UK)	
* 54	4-950-662-41	PANEL (B3120), BACK (G)	
* 54	4-950-662-51	PANEL (B3120), BACK (IT)	
* 55	3-703-244-00	BUSHING (2104), CORD	
⚠56	1-575-654-11	CORD, POWER (AEP, G, IT, EE)	

Ref. No.	Part No.	Description	Remark
⚠56	1-575-669-21	CORD, POWER (UK)	
57	4-947-010-01	SCREW, FEEDER FIXED	
* 58	4-949-235-01	HOOK	
59	4-931-169-01	FOOT	
* 60	4-932-867-01	CUSHION	
61	4-812-134-11	RIVET NYLON, 3.5	
⚠F101	1-532-259-00	FUSE (T1.6A)	
⚠F103	1-532-203-00	FUSE (T2.0A)	
⚠F104	1-532-203-00	FUSE (T2.0A)	
⚠T901	1-450-812-11	TRANSFORMER, POWER	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

MAIN

SECTION 4
ELECTRICAL PARTS LIST

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- RESISTORS
  All resistors are in ohms
  METAL:Metal-film resistor
  METAL OXIDE:Metal Oxide-film resistor
  F:nonflammable
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA...: μA..., uPA...: μPA...,
  uPB...: μPB..., uPC...: μPC...,
  uPD...: μPD...
- CAPACITORS
  uF: μF
- COILS
  uH: μH

When indication parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

G:Germany

IT:Italian

EE:East European

Ref. No.	Part No.	Description			Remark
*	A-4347-266-A	MAIN BOARD, COMPLETE (AEP, EE)			
*	A-4347-272-A	MAIN BOARD, COMPLETE (G, IT)			
*	A-4347-265-A	MAIN BOARD, COMPLETE (UK)			
		********************			
*	1-533-213-31	HOLDER, FUSE			
*	3-309-144-21	HEAT SINK			
*	4-942-204-01	PLATE, GROUND			
	7-682-548-04	SCREW +BVTT 3X8 (S)			
		< CAPACITOR >			
C49	1-102-394-11	CERAMIC	0.01uF		250V
C101	1-126-161-11	ELECT	2.2uF	20%	50V
C102	1-162-282-31	CERAMIC	100PF	10%	50V
C103	1-126-022-11	ELECT	47uF	20%	16V
C104	1-106-347-00	MYLAR	1500PF	5%	200V
C105	1-130-480-00	MYLAR	0.0056uF	5%	50V
C106	1-124-464-11	ELECT	0.22uF	20%	50V
C107	1-126-022-11	ELECT	47uF	20%	16V
C108	1-162-286-31	CERAMIC	220PF	10%	50V (G, IT)
C109	1-162-219-31	CERAMIC	68PF	5%	50V
C110	1-162-207-31	CERAMIC	22PF	5%	50V
C112	1-126-163-11	ELECT	4.7uF	20%	50V
C113	1-126-163-11	ELECT	4.7uF	20%	50V
C114	1-162-286-31	CERAMIC	220PF	10%	50V (G, IT)
C115	1-162-286-31	CERAMIC	220PF	10%	50V (G, IT)
C116	1-162-219-31	CERAMIC	68PF	5%	50V
C117	1-162-294-31	CERAMIC	0.001uF	10%	50V
C118	1-126-059-11	ELECT	10uF	20%	50V
C119	1-126-022-11	ELECT	47uF	20%	16V
C138	1-126-059-11	ELECT	10uF	20%	50V
C139	1-162-282-31	CERAMIC	100PF	10%	50V
C140	1-162-286-31	CERAMIC	220PF	10%	50V
C141	1-126-101-11	ELECT	100uF	20%	16V
C143	1-124-910-11	ELECT	47uF	20%	50V
C144	1-136-163-00	FILM	0.068uF	5%	50V
C145	1-136-163-00	FILM	0.068uF	5%	50V
C146	1-136-163-00	FILM	0.068uF	5%	50V (G, IT)
C147	1-136-163-00	FILM	0.068uF	5%	50V (G, IT)
C148	1-161-494-00	CERAMIC	0.022uF		25V
C155	1-162-286-31	CERAMIC	220PF	10%	50V (G, IT)
C157	1-136-161-00	FILM	0.047uF	5%	50V
C170	1-126-049-11	ELECT	22uF	20%	25V
⚠C199	1-161-744-00	CERAMIC	0.01uF		400V
C201	1-126-161-11	ELECT	2.2uF	20%	50V
C202	1-162-282-31	CERAMIC	100PF	10%	50V
C203	1-126-022-11	ELECT	47uF	20%	16V
C204	1-106-347-00	MYLAR	1500PF	5%	200V
C205	1-130-480-00	MYLAR	0.0056uF	5%	50V
C206	1-124-464-11	ELECT	0.22uF	20%	50V
C207	1-126-022-11	ELECT	47uF	20%	16V
C208	1-162-286-31	CERAMIC	220PF	10%	50V (G, IT)
C209	1-162-219-31	CERAMIC	68PF	5%	50V
C210	1-162-207-31	CERAMIC	22PF	5%	50V
C212	1-126-163-11	ELECT	4.7uF	20%	50V
C213	1-126-163-11	ELECT	4.7uF	20%	50V
C214	1-162-286-31	CERAMIC	220PF	10%	50V (G, IT)
C215	1-162-286-31	CERAMIC	220PF	10%	50V (G, IT)
C216	1-162-219-31	CERAMIC	68PF	5%	50V
C217	1-162-294-31	CERAMIC	0.001uF	10%	50V
C218	1-126-059-11	ELECT	10uF	20%	50V
C219	1-126-022-11	ELECT	47uF	20%	16V
C238	1-126-059-11	ELECT	10uF	20%	50V
C239	1-162-282-31	CERAMIC	100PF	10%	50V
C240	1-162-286-31	CERAMIC	220PF	10%	50V
C241	1-126-101-11	ELECT	100uF	20%	16V
C243	1-124-910-11	ELECT	47uF	20%	50V
C244	1-136-163-00	FILM	0.068uF	5%	50V

MAIN

Ref. No.	Part No.	Description			Remark
C245	1-136-163-00	FILM	0.068uF	5%	50V
C246	1-136-163-00	FILM	0.068uF	5%	50V (G, IT)
C247	1-136-163-00	FILM	0.068uF	5%	50V (G, IT)
C248	1-161-494-00	CERAMIC	0.022uF		25V
C255	1-161-286-31	CERAMIC	220PF	10%	50V (G, IT)
C257	1-136-161-00	FILM	0.047uF	5%	50V
C258	1-164-159-11	CERAMIC	0.1uF		50V
C260	1-124-122-11	ELECT	100uF	20%	50V
C270	1-126-049-11	ELECT	22uF	20%	25V
C301	1-161-494-00	CERAMIC	0.022uF		25V
C302	1-126-059-11	ELECT	10uF	20%	50V
C303	1-161-494-00	CERAMIC	0.022uF		25V
C304	1-161-494-00	CERAMIC	0.022uF		25V
C305	1-161-494-00	CERAMIC	0.022uF		25V
C306	1-136-158-00	FILM	0.027uF	5%	50V
C307	1-130-477-00	MYLAR	0.0033uF	5%	50V
C309	1-126-233-11	ELECT	22uF	20%	50V
C310	1-124-122-11	ELECT	100uF	20%	50V
C311	1-124-587-11	ELECT	220uF	20%	6.3V
C312	1-126-163-11	ELECT	4.7uF	20%	50V
C313	1-124-587-11	ELECT	220uF	20%	6.3V
C314	1-124-994-11	ELECT	100uF	20%	10V
C315	1-164-159-11	CERAMIC	0.1uF		50V
C316	1-164-159-11	CERAMIC	0.1uF		50V
C317	1-124-910-11	ELECT	47uF	20%	50V
C318	1-124-910-11	ELECT	47uF	20%	50V
C319	1-126-059-11	ELECT	10uF	20%	50V
C320	1-126-059-11	ELECT	10uF	20%	50V
C321	1-161-379-00	CERAMIC	0.01MF	30%	25V (G, IT)
C322	1-161-379-00	CERAMIC	0.01MF	30%	25V (G, IT)
C323	1-161-377-00	CERAMIC	0.0047MF	20%	50V (G, IT)
C324	1-161-377-00	CERAMIC	0.0047MF	20%	50V (G, IT)
C325	1-126-224-11	ELECT	4700uF	20%	42V
C326	1-126-224-11	ELECT	4700uF	20%	42V
C327	1-124-920-11	ELECT	330uF	20%	63V
C330	1-124-473-11	ELECT	1000uF	20%	10V
C331	1-102-394-11	CERAMIC	0.01uF		250V
C332	1-136-161-00	FILM	0.047uF	5%	50V
C333	1-136-161-00	FILM	0.047uF	5%	50V
C334	1-124-994-11	ELECT	100uF	20%	10V
C335	1-124-994-11	ELECT	100uF	20%	10V
C336	1-126-059-11	ELECT	10uF	20%	50V
C337	1-126-059-11	ELECT	10uF	20%	50V
C338	1-124-887-00	ELECT	3300uF	20%	16V
C339	1-124-887-00	ELECT	3300uF	20%	16V
C340	1-136-161-00	FILM	3300uF	5%	50V (UK)
C341	1-136-161-00	FILM	3300uF	5%	50V (UK)
C342	1-126-022-11	FILM	3300uF	5%	50V (UK)

Ref. No.	Part No.	Description			Remark
C361	1-136-155-00	FILM	0.015uF	5%	50V
C362	1-136-161-00	FILM	0.047uF	5%	50V
C364	1-161-379-00	CERAMIC	0.01uF	30%	25V (G, IT)
C365	1-161-379-00	CERAMIC	0.01uF	30%	25V (G, IT)
C851	1-136-176-00	FILM	0.82uF	5%	50V
C852	1-136-164-00	FILM	0.082uF	5%	50V
C853	1-162-219-31	CERAMIC	68PF	5%	50V
C854	1-126-049-11	ELECT	22uF	20%	25V
C855	1-126-049-11	ELECT	22uF	20%	25V
C856	1-126-300-11	ELECT	0.47uF	20%	50V
C857	1-126-059-11	ELECT	10uF	20%	50V
C861	1-136-176-00	FILM	0.82uF	5%	50V
C862	1-136-164-00	FILM	0.082uF	5%	50V
C863	1-162-219-31	CERAMIC	68PF	5%	50V
C865	1-126-049-11	ELECT	22uF	20%	25V
C866	1-126-300-11	ELECT	0.47uF	20%	50V
C867	1-126-059-11	ELECT	10uF	20%	50V
C880	1-124-994-11	ELECT	100uF	20%	10V
C999	1-161-494-00	CERAMIC	0.022MF		25V (G, IT)
		< CONNECTOR >			
* CN101	1-564-321-00	PIN, CONNECTOR 2P			
CN102	1-535-139-00	BASE POST 22MM (10MM PITCH) 2P			
* CN103	1-564-358-00	PIN, CONNECTOR 3P			(UK)
* CN104	1-566-859-11	SOCKET, CONNECTOR 15P			
* CN105	1-564-509-11	PLUG, CONNECTOR 6P			
* CN106	1-566-858-41	SOCKET, CONNECTOR 11P			
* CN107	1-564-507-11	PLUG, CONNECTOR 4P			
* CN109	1-564-337-00	PIN, CONNECTOR 3P			
* CN110	1-568-839-11	SOCKET, CONNECTOR 23P			
* CN113	1-564-339-00	PIN, CONNECTOR 5P			
* CN181	1-573-978-11	CONNECTOR, BOARD TO BOARD 11P			
CNJ101	1-565-352-41	JACK, PIN 2P			
CNJ102	1-565-258-11	JACK, PIN 4P			
CNJ103	1-565-352-11	JACK, PIN 2P			
		< DIODE >			
D101	8-719-200-77	DIODE	10E2N		
D102	8-719-200-77	DIODE	10E2N		
D103	8-719-200-77	DIODE	10E2N		
D104	8-719-200-77	DIODE	10E2N		
D105	8-719-987-63	DIODE	1N4148M		
D106	8-719-987-63	DIODE	1N4148M		
D107	8-719-815-85	DIODE	1S1585		
D108	8-719-815-85	DIODE	1S1585		
D109	8-719-302-38	DIODE	RBV-602-01		
D113	8-719-200-82	DIODE	11ES2 (UK)		
D114	8-719-934-21	DIODE	HZS30-1L (UK)		
D114	8-719-002-66	DIODE	HZS33-2L (EXCEPT UK)		
D115	8-719-200-77	DIODE	10E2N		

MAIN

Ref. No.	Part No.	Description	Remark
D116	8-719-200-82	DIODE 11ES2 (UK)	
D117	8-719-200-82	DIODE 11ES2 (UK)	
D118	8-719-200-82	DIODE 11ES2	
D119	8-719-014-66	DIODE UZP-5.6B	
D120	8-719-815-85	DIODE 1S1585	
D121	8-719-815-85	DIODE 1S1585	
D122	8-719-815-85	DIODE 1S1585	
D123	8-719-815-85	DIODE 1S1585	
D124	8-719-815-85	DIODE 1S1585	
D125	8-719-000-84	DIODE UZL-7M1	
D126	8-719-000-84	DIODE UZL-7M1	
D128	8-719-815-85	DIODE 1S1585	
D218	8-719-000-81	DIODE UZL-7L3	
D221	8-719-000-84	DIODE UZL-7M1	
D222	8-719-000-84	DIODE UZL-7M1	
D862	8-719-987-63	DIODE 1N4148M	
D863	8-719-987-63	DIODE 1N4148M	
		< FUSE >	
⚠F101	1-532-259-00	FUSE (T1.6A)	
⚠F103	1-532-203-00	FUSE (T2.0A)	
⚠F104	1-532-203-00	FUSE (T2.0A)	
		< IC >	
IC101	8-759-604-86	IC M5F7807L	
IC102	8-759-604-90	IC M5F7907L	
IC103	8-749-920-09	IC STK-4152MK2K	
IC104	8-759-000-48	IC MC14052BCP	
IC105	8-759-140-53	IC MC14053BC	
IC106	8-759-634-50	IC M5218AL	
IC107	8-759-634-50	IC M5218AL	
IC108	8-759-000-48	IC MC14052BCP	
IC109	8-759-140-53	IC MC14053BCP	
IC110	8-759-000-48	IC MC14052BCP	
IC121	8-759-111-68	IC uPC1237HA	
IC122	8-759-710-73	IC NJM4580L	
IC855	8-759-634-50	IC M5218AL	
		< LINK, IC >	
⚠ICP101	1-532-842-11	LINK, IC	
⚠ICP102	1-532-842-11	LINK, IC	
		< COIL >	
* L10	1-420-872-00	COIL, AIR CORE 1.9uH (G, IT)	
* L11	1-420-872-00	COIL, AIR CORE 1.9uH (G, IT)	
* L101	1-420-872-00	COIL, AIR CORE 1.9uH	
* L102	1-420-872-00	COIL, AIR CORE 1.9uH	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
		< TRANSISTOR >	
Q101	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q102	8-729-900-63	TRANSISTOR DTA124ES	
Q103	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q104	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q853	8-729-900-63	TRANSISTOR DTA124ES	
Q854	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q855	8-729-224-61	TRANSISTOR 2SK246-Y	
Q856	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q857	8-729-224-61	TRANSISTOR 2SK246-Y	
Q858	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q859	8-729-141-26	TRANSISTOR 2SC3622A-LK	
Q860	8-729-141-26	TRANSISTOR 2SC3622A-LK	
		< RESISTOR >	
R71	1-249-425-11	CARBON 4.7K 5% 1/4W(AEP, G, IT, EE)	
R72	1-249-425-11	CARBON 4.7K 5% 1/4W(AEP, G, IT, EE)	
R101	1-249-417-11	CARBON 1K 5% 1/4W	
R102	1-249-417-11	CARBON 1K 5% 1/4W	(G , IT)
R103	1-249-441-11	CARBON 100K 5% 1/4W	
R104	1-249-441-11	CARBON 100K 5% 1/4W	
R105	1-249-415-11	CARBON 680 5% 1/4W	
R106	1-249-437-11	CARBON 47K 5% 1/4W	
R107	1-247-897-11	CARBON 560K 5% 1/4W	
R108	1-249-417-11	CARBON 1K 5% 1/4W	
R109	1-249-409-11	CARBON 220 5% 1/4W	
R110	1-249-421-11	CARBON 2.2K 5% 1/4W	
R111	1-249-428-11	CARBON 8.2K 5% 1/4W	
R112	1-249-417-11	CARBON 1K 5% 1/4W	
R113	1-247-903-00	CARBON 1M 5% 1/4W	
R114	1-249-417-11	CARBON 1K 5% 1/4W	
R115	1-249-417-11	CARBON 1K 5% 1/4W	
R116	1-249-413-11	CARBON 470 5% 1/4W	
R118	1-249-437-11	CARBON 47K 5% 1/4W	
R119	1-249-437-11	CARBON 47K 5% 1/4W	
R120	1-249-441-11	CARBON 100K 5% 1/4W	
R121	1-249-425-11	CARBON 4.7K 5% 1/4W(AEP, G, IT, EE)	
R122	1-249-427-11	CARBON 6.8K 5% 1/4W(AEP, G, IT, EE)	
R123	1-249-432-11	CARBON 18K 5% 1/4W(AEP, G, IT, EE)	
R124	1-249-421-11	CARBON 2.2K 5% 1/4W	
R125	1-249-441-11	CARBON 100K 5% 1/4W	
R126	1-249-429-11	CARBON 10K 5% 1/4W	
R136	1-249-441-11	CARBON 100K 5% 1/4W	
R137	1-249-417-11	CARBON 1K 5% 1/4W	
R138	1-249-438-11	CARBON 56K 5% 1/4W	
R139	1-249-438-11	CARBON 56K 5% 1/4W	
R140	1-247-756-11	CARBON 2.2K 5% 1/2W	
R142	1-247-756-11	CARBON 2.2K 5% 1/2W	

MAIN

Ref. No.	Part No.	Description				Remark
⚠R144	1-217-156-00	RES. METAL PLATE	0.22		5W	F
R145	1-247-727-11	CARBON	10	5%	1/2W	
R147	1-249-417-11	CARBON	1K	5%	1/4W	
R148	1-249-431-11	CARBON	15K	5%	1/4W	
R149	1-249-437-11	CARBON	47K	5%	1/4W	
R150	1-247-727-11	CARBON	10	5%	1/2W	
⚠R152	1-215-918-00	METAL OXIDE	1.5K	5%	3W	F
R153	1-247-727-11	CARBON	10	5%	1/2W	(G, IT)
R156	1-249-414-11	CARBON	560	5%	1/4W	
R157	1-249-441-11	CARBON	100K	5%	1/4W	
R191	1-212-958-00	FUSIBLE	10	5%	1/2W	F (UK)
R192	1-212-958-00	FUSIBLE	10	5%	1/2W	F (UK)
⚠R193	1-212-934-00	FUSIBLE	1	5%	1/2W	F
R201	1-249-417-11	CARBON	1K	5%	1/4W	
R202	1-249-417-11	CARBON	1K	5%	1/4W	(G, IT)
R203	1-249-441-11	CARBON	100K	5%	1/4W	
R205	1-249-415-11	CARBON	680	5%	1/4W	
R206	1-249-437-11	CARBON	47K	5%	1/4W	
R207	1-247-897-11	CARBON	560K	5%	1/4W	
R208	1-249-417-11	CARBON	1K	5%	1/4W	
R209	1-249-409-11	CARBON	220	5%	1/4W	
R210	1-249-421-11	CARBON	2.2K	5%	1/4W	
R211	1-249-428-11	CARBON	8.2K	5%	1/4W	
R212	1-249-417-11	CARBON	1K	5%	1/4W	
R213	1-247-903-00	CARBON	1M	5%	1/4W	
R214	1-249-417-11	CARBON	1K	5%	1/4W	
R215	1-249-417-11	CARBON	1K	5%	1/4W	
R216	1-249-413-11	CARBON	470	5%	1/4W	
R218	1-249-437-11	CARBON	47K	5%	1/4W	
R219	1-249-437-11	CARBON	47K	5%	1/4W	
R220	1-249-441-11	CARBON	100K	5%	1/4W	
R221	1-249-425-11	CARBON	4.7K	5%	1/4W	(AEP, G, IT, EE)
R222	1-249-427-11	CARBON	6.8K	5%	1/4W	(AEP, G, IT, EE)
R223	1-249-432-11	CARBON	18K	5%	1/4W	(AEP, G, IT, EE)
R224	1-249-421-11	CARBON	2.2K	5%	1/4W	
R225	1-249-441-11	CARBON	100K	5%	1/4W	
R226	1-249-429-11	CARBON	10K	5%	1/4W	
R236	1-249-441-11	CARBON	100K	5%	1/4W	
R237	1-249-417-11	CARBON	1K	5%	1/4W	
R238	1-249-438-11	CARBON	56K	5%	1/4W	
R239	1-249-438-11	CARBON	56K	5%	1/4W	
R240	1-247-756-11	CARBON	2.2K	5%	1/2W	
R242	1-247-756-11	CARBON	2.2K	5%	1/2W	
⚠R244	1-217-156-00	RES. METAL PLATE	0.22		5W	F
R245	1-247-727-11	CARBON	10	5%	1/2W	
R247	1-249-417-11	CARBON	1K	5%	1/4W	
R248	1-249-431-11	CARBON	15K	5%	1/4W	
R249	1-249-438-11	CARBON	56K	5%	1/4W	

Ref. No.	Part No.	Description				Remark
R250	1-247-727-11	CARBON	10	5%	1/2W	
⚠R252	1-215-918-00	METAL OXIDE	1.5K	5%	3W	F
R253	1-247-727-11	CARBON	10	5%	1/2W	(G, IT)
R254	1-249-441-11	CARBON	100K	5%	1/4W	
R256	1-249-414-11	CARBON	560	5%	1/4W	
R257	1-249-441-11	CARBON	100K	5%	1/4W	
R301	1-249-433-11	CARBON	22K	5%	1/4W	
R302	1-249-433-11	CARBON	22K	5%	1/4W	
R303	1-249-433-11	CARBON	22K	5%	1/4W	
R304	1-249-433-11	CARBON	22K	5%	1/4W	
R305	1-249-429-11	CARBON	10K	5%	1/4W	
R307	1-249-415-11	CARBON	680	5%	1/4W	
R308	1-249-429-11	CARBON	10K	5%	1/4W	
R309	1-249-429-11	CARBON	10K	5%	1/4W	
R310	1-249-432-11	CARBON	18K	5%	1/4W	
R311	1-249-435-11	CARBON	33K	5%	1/4W	
R312	1-249-433-11	CARBON	22K	5%	1/4W	
R313	1-249-433-11	CARBON	22K	5%	1/4W	
R316	1-247-752-11	CARBON	1K	5%	1/2W	
R318	1-247-752-11	CARBON	1K	5%	1/2W	
⚠R320	1-212-881-11	FUSIBLE	100	5%	1/4W	F
⚠R321	1-212-881-11	FUSIBLE	100	5%	1/4W	F
⚠R322	1-215-891-11	METAL OXIDE	680	5%	2W	F
R323	1-249-429-11	CARBON	10K	5%	1/4W	
R324	1-249-427-11	CARBON	6.8K	5%	1/4W	
R325	1-249-427-11	CARBON	6.8K	5%	1/4W	
R326	1-249-437-11	CARBON	47K	5%	1/4W	
R327	1-249-441-11	CARBON	100K	5%	1/4W	
R328	1-247-760-11	CARBON	4.7K	5%	1/2W	
R329	1-249-421-11	CARBON	2.2K	5%	1/4W	
R341	1-249-433-11	CARBON	22K	5%	1/4W	
R342	1-249-425-11	CARBON	4.7K	5%	1/4W	
R348	1-249-433-11	CARBON	22K	5%	1/4W	
R349	1-249-433-11	CARBON	22K	5%	1/4W	
R352	1-249-437-11	CARBON	47K	5%	1/4W	
R410	1-249-435-11	CARBON	33K	5%	1/4W	
R411	1-249-435-11	CARBON	33K	5%	1/4W	
R412	1-249-426-11	CARBON	5.6K	5%	1/4W	
R851	1-249-417-11	CARBON	1K	5%	1/4W	
R852	1-249-441-11	CARBON	100K	5%	1/4W	
R853	1-249-425-11	CARBON	4.7K	5%	1/4W	
R854	1-249-425-11	CARBON	4.7K	5%	1/4W	
R855	1-249-412-11	CARBON	390	5%	1/4W	
R857	1-249-418-11	CARBON	1.2K	5%	1/4W	
R858	1-249-438-11	CARBON	56K	5%	1/4W	
R859	1-249-429-11	CARBON	10K	5%	1/4W	
R860	1-249-429-11	CARBON	10K	5%	1/4W	
R861	1-249-417-11	CARBON	1K	5%	1/4W	
R862	1-249-441-11	CARBON	100K	5%	1/4W	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description				Remark
R863	1-249-425-11	CARBON	4.7K	5%	1/4W	
R864	1-249-425-11	CARBON	4.7K	5%	1/4W	
R865	1-249-412-11	CARBON	390	5%	1/4W	
R867	1-249-418-11	CARBON	1.2K	5%	1/4W	
R868	1-249-438-11	CARBON	56K	5%	1/4W	
R869	1-249-429-11	CARBON	10K	5%	1/4W	
R870	1-247-887-00	CARBON	220K	5%	1/4W	
R871	1-249-433-11	CARBON	22K	5%	1/4W	
R872	1-249-423-11	CARBON	3.3K	5%	1/4W	
R873	1-249-423-11	CARBON	3.3K	5%	1/4W	
R876	1-249-417-11	CARBON	1K	5%	1/4W	
R878	1-247-887-00	CARBON	220K	5%	1/4W	
⚠R1076	1-212-940-00	FUSIBLE	1.8	5%	1/2W F	(UK)
⚠R1077	1-212-940-00	FUSIBLE	1.8	5%	1/2W F	(UK)
		< RELAY >				
RY101	1-515-765-11	RELAY				
		< SWITCH >				
⚠S101	1-554-920-51	SWITCH, PUSH (AC POWER) (1 KEY)				
		< TERMINAL BOARD >				
TB101	1-537-238-11	TERMINAL BOARD				

****

Ref. No.	Part No.	Description				Remark
*	A-4347-257-A	PANEL BOARD, COMPLETE				
		*********************				
*	A-4347-276-A	GEQ BOARD, COMPLETE				
		******************				
*	1-642-746-11	H.P. BOARD				
		*********				
*	1-642-747-11	VOL BOARD				
		*********				
*	4-921-941-01	CUSHION (FL)				
*	4-923-103-01	HOLDER, FL TUBE				
*	4-950-658-01	HOLDER (FU), LED				
*	4-950-660-01	HOLDER, LED				
		< CAPACITOR >				
C50	1-124-257-00	ELECT	2.2uF	20%	50V	
C120	1-126-022-11	ELECT	47uF	20%	16V	
C121	1-126-059-11	ELECT	10uF	20%	50V	
C122	1-162-286-31	CERAMIC	220PF	10%	50V	
C123	1-106-359-00	MYLAR	4700PF	5%	200V	
C124	1-110-340-11	MYLAR	270PF	5%	50V	
C125	1-136-154-00	FILM	0.012uF	5%	50V	
C126	1-130-469-00	MYLAR	680PF	5%	50V	
C127	1-136-159-00	FILM	0.033uF	5%	50V	
C128	1-130-474-00	MYLAR	0.0018uF	5%	50V	

Ref. No.	Part No.	Description				Remark
C129	1-136-163-00	FILM	0.068uF	5%	50V	
C130	1-130-478-00	MYLAR	0.0039uF	5%	50V	
C131	1-136-168-00	FILM	0.18uF	5%	50V	
C132	1-136-153-00	FILM	0.01uF	5%	50V	
C133	1-136-163-00	FILM	0.068uF	5%	50V	
C134	1-126-301-11	ELECT	1uF	20%	50V	
C135	1-136-158-00	FILM	0.027uF	5%	50V	
C136	1-126-300-11	ELECT	0.47uF	20%	50V	
C137	1-162-207-31	CERAMIC	22PF	5%	50V	
C210	1-126-022-11	ELECT	47uF	20%	16V	
C221	1-126-059-11	ELECT	10uF	20%	50V	
C222	1-162-286-31	CERAMIC	220PF	10%	50V	
C223	1-106-359-00	MYLAR	4700PF	5%	200V	
C224	1-110-340-11	MYLAR	270PF	5%	50V	
C225	1-136-154-00	FILM	0.012uF	5%	50V	
C226	1-130-469-00	MYLAR	680PF	5%	50V	
C228	1-130-474-00	MYLAR	0.0018uF	5%	50V	
C229	1-136-163-00	FILM	0.068uF	5%	50V	
C230	1-130-478-00	MYLAR	0.0039uF	5%	50V	
C231	1-136-168-00	FILM	0.18uF	5%	50V	
C232	1-136-153-00	FILM	0.01uF	5%	50V	
C233	1-136-163-00	FILM	0.068uF	5%	50V	
C234	1-126-301-11	ELECT	1uF	20%	50V	
C235	1-136-158-00	FILM	0.027uF	5%	50V	
C236	1-126-300-11	ELECT	0.47uF	20%	50V	
C237	1-162-207-31	CERAMIC	22PF	5%	50V	
C277	1-136-159-00	FILM	0.033uF	5%	50V	
C308	1-164-159-11	CERAMIC	0.1uF		50V	
C351	1-164-159-11	CERAMIC	0.1uF		50V	
C352	1-126-049-11	ELECT	22uF	20%	25V	
C375	1-164-159-11	CERAMIC	0.1uF		50V	
C418	1-164-159-11	CERAMIC	0.1uF		50V	
C419	1-136-153-00	FILM	0.01uF	5%	50V	
C420	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C422	1-125-486-11	DOUBLE LAYERS	0.22F		5.5V	
C423	1-161-494-00	CERAMIC	0.022uF		25V	
C424	1-164-159-11	CERAMIC	0.1uF		50V	
C425	1-126-049-11	ELECT	22uF	20%	25V	
C426	1-161-494-00	CERAMIC	0.022uF		25V	
C427	1-161-494-00	CERAMIC	0.022uF		25V	
C428	1-126-059-11	ELECT	10uF	20%	50V	
C429	1-126-059-11	ELECT	10uF	20%	50V	
C430	1-161-494-00	CERAMIC	0.022uF		25V	
C431	1-161-494-00	CERAMIC	0.022uF		25V	
C432	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C433	1-126-059-11	ELECT	10uF	20%	50V	
C434	1-126-059-11	ELECT	10uF	20%	50V	
C435	1-161-374-11	CERAMIC	0.0015uF	20%	50V	
C436	1-161-494-00	CERAMIC	0.022uF		25V	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
C437	1-124-994-11	ELECT 100uF 20% 10V	
C444	1-126-049-11	ELECT 22uF 20% 25V	
C601	1-136-165-00	FILM 0.1uF 5% 50V	
C602	1-126-022-11	ELECT 47uF 20% 16V	
C603	1-126-022-11	ELECT 47uF 20% 16V	
C995	1-126-301-11	ELECT 1uF 20% 50V	

< CONNECTOR >

Ref. No.	Part No.	Description	Remark
* CN191	1-573-979-11	CONNECTOR, BOARD TO BOARD 11P	
* CN502	1-568-839-11	SOCKET, CONNECTOR 23P	
* CN503	1-568-322-11	PLUG, CONNECTOR 10P	
CN601	1-568-321-11	SOCKET, CONNECTOR 10P	
* CN609	1-564-339-00	PIN, CONNECTOR 5P	

< COMPOSITION CIRCUIT BLOCK >

Ref. No.	Part No.	Description	Remark
CP501	1-239-054-11	COMPOSITION CIRCUIT BLOCK	
CP502	1-239-054-11	COMPOSITION CIRCUIT BLOCK	
CP503	1-239-054-11	COMPOSITION CIRCUIT BLOCK	
CP504	1-239-054-11	COMPOSITION CIRCUIT BLOCK	

< DIODE >

Ref. No.	Part No.	Description	Remark
D55	8-719-200-82	DIODE 11ES2	
D127	8-719-000-54	DIODE UZL-6L3	
D501	8-719-987-63	DIODE 1N4148M	
D502	8-719-200-82	DIODE 11ES2	
D503	8-719-200-82	DIODE 11ES2	
D505	8-719-000-60	DIODE UZL-6M2	
D506	8-719-987-63	DIODE 1N4148M	
D507	8-719-987-63	DIODE 1N4148M	
D508	8-719-987-63	DIODE 1N4148M	
D509	8-719-987-63	DIODE 1N4148M	
D510	8-719-987-63	DIODE 1N4148M	
D511	8-719-987-63	DIODE 1N4148M	
D512	8-719-987-63	DIODE 1N4148M	
D521	8-719-301-39	LED SEL2210S-D	
D522	8-719-301-39	LED SEL2210S-D	
D523	8-719-301-39	LED SEL2210S-D	
D524	8-719-301-39	LED SEL2210S-D	
D525	8-719-301-39	LED SEL2210S-D	
D526	8-719-301-39	LED SEL2210S-D	
D527	8-719-301-39	LED SEL2210S-D	
D528	8-719-301-39	LED SEL2210S-D	
D529	8-719-301-39	LED SEL2210S-D	
D530	8-719-301-39	LED SEL2210S-D	
D531	8-719-301-39	LED SEL2210S-D	
D532	8-719-301-39	LED SEL2210S-D	
D533	8-719-301-39	LED SEL2210S-D	
D534	8-719-301-39	LED SEL2210S-D	
D535	8-719-313-69	DIODE SEL3210S-CD	
D536	8-719-313-69	DIODE SEL3210S-CD	
D537	8-719-313-69	DIODE SEL3210S-CD	
D538	8-719-313-69	DIODE SEL3210S-CD	
D539	8-719-313-69	DIODE SEL3210S-CD	
D540	8-719-313-69	DIODE SEL3210S-CD	
D541	8-719-313-69	DIODE SEL3210S-CD	
D542	8-719-313-69	DIODE SEL3210S-CD	
D550	8-719-313-69	DIODE SEL3210S-CD	
D551	8-719-987-63	DIODE 1N4148M	
D552	8-719-987-63	DIODE 1N4148M	
D553	8-719-987-63	DIODE 1N4148M	
D554	8-719-987-63	DIODE 1N4148M	
D554	8-719-987-63	DIODE 1N4148M	
D566	8-719-987-63	DIODE 1N4148M	
D601	8-719-200-82	DIODE 11ES2	
D603	8-719-933-33	DIODE HZS6A1L	

< FLUORESCENT INDICATOR >

Ref. No.	Part No.	Description	Remark
FL501	1-519-648-31	INDICATOR TUBE, FLUORESCENT	

< IC >

Ref. No.	Part No.	Description	Remark
IC111	8-759-633-78	IC M5289P	
IC112	8-759-822-26	IC LC7522K	
IC113	8-759-633-78	IC M5289P	
IC501	8-759-635-63	IC M51943BSL	
IC502	8-759-066-29	IC uPD75108CW-C98	
IC503	8-759-822-27	IC LC7565K	
IC504	8-759-991-11	IC XR1091DCP	
IC601	8-759-820-62	IC LB1639	

< JACK >

Ref. No.	Part No.	Description	Remark
J901	1-507-854-00	JACK, PHONE (HEADPHONES)	

< COIL >

Ref. No.	Part No.	Description	Remark
L501	1-408-121-00	INDUCTOR 22uH	

< TRANSISTOR >

Ref. No.	Part No.	Description	Remark
Q501	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q502	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q511	8-729-900-36	TRANSISTOR DTC124ES	
Q513	8-729-900-63	TRANSISTOR DTA124ES	
Q514	8-729-900-63	TRANSISTOR DTA124ES	
Q515	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q516	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q517	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q518	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q519	8-729-620-05	TRANSISTOR 2SC2603-EF	

PANEL GEQ H. P. VOL

Ref. No.	Part No.	Description			Remark
Q520	8-729-620-05	TRANSISTOR	2SC2603-EF		
Q521	8-729-620-05	TRANSISTOR	2SC2603-EF		
Q530	8-729-900-36	TRANSISTOR	DTC124ES		
Q555	8-729-900-63	TRANSISTOR	DTA124ES		
		< RESISTOR >			
R40	1-249-421-11	CARBON	2.2K	5%	1/4W
R127	1-247-852-11	CARBON	7.5K	5%	1/4W
R128	1-247-903-00	CARBON	1M	5%	1/4W
R129	1-247-903-00	CARBON	1M	5%	1/4W
R130	1-247-903-00	CARBON	1M	5%	1/4W
R131	1-247-903-00	CARBON	1M	5%	1/4W
R132	1-247-903-00	CARBON	1M	5%	1/4W
R133	1-247-903-00	CARBON	1M	5%	1/4W
R134	1-247-903-00	CARBON	1M	5%	1/4W
R135	1-247-852-11	CARBON	7.5K	5%	1/4W
R227	1-247-852-11	CARBON	7.5K	5%	1/4W
R228	1-247-903-00	CARBON	1M	5%	1/4W
R229	1-247-903-00	CARBON	1M	5%	1/4W
R230	1-247-903-00	CARBON	1M	5%	1/4W
R231	1-247-903-00	CARBON	1M	5%	1/4W
R232	1-247-903-00	CARBON	1M	5%	1/4W
R233	1-247-903-00	CARBON	1M	5%	1/4W
R234	1-247-903-00	CARBON	1M	5%	1/4W
R235	1-247-852-11	CARBON	7.5K	5%	1/4W
R314	1-249-417-11	CARBON	1K	5%	1/4W
R315	1-249-417-11	CARBON	1K	5%	1/4W
R346	1-249-425-11	CARBON	4.7K	5%	1/4W
R399	1-249-405-11	CARBON	100	5%	1/4W
R408	1-249-405-11	CARBON	100	5%	1/4W
R409	1-249-419-11	CARBON	1.5K	5%	1/4W
R413	1-249-441-11	CARBON	100K	5%	1/4W
R414	1-249-432-11	CARBON	18K	5%	1/4W
R415	1-247-891-00	CARBON	330K	5%	1/4W
R416	1-249-425-11	CARBON	4.7K	5%	1/4W
R417	1-249-437-11	CARBON	47K	5%	1/4W
R418	1-247-891-00	CARBON	330K	5%	1/4W
R421	1-249-433-11	CARBON	22K	5%	1/4W
R422	1-249-411-11	CARBON	330	5%	1/4W
R423	1-249-417-11	CARBON	1K	5%	1/4W
R424	1-247-903-00	CARBON	1M	5%	1/4W
R499	1-249-417-11	CARBON	1K	5%	1/4W
R521	1-249-425-11	CARBON	4.7K	5%	1/4W
R522	1-249-425-11	CARBON	4.7K	5%	1/4W
R524	1-249-417-11	CARBON	1K	5%	1/4W
R525	1-249-425-11	CARBON	4.7K	5%	1/4W
R526	1-249-429-11	CARBON	10K	5%	1/4W
R527	1-249-393-11	CARBON	10	5%	1/4W
R528	1-249-417-11	CARBON	1K	5%	1/4W

Ref. No.	Part No.	Description			Remark
R529	1-249-424-11	CARBON	3.9K	5%	1/4W
R530	1-249-417-11	CARBON	1K	5%	1/4W
R532	1-249-421-11	CARBON	2.2K	5%	1/4W
R533	1-249-421-11	CARBON	2.2K	5%	1/4W
R534	1-249-441-11	CARBON	100K	5%	1/4W
R535	1-249-441-11	CARBON	100K	5%	1/4W
R536	1-249-417-11	CARBON	1K	5%	1/4W
R537	1-249-417-11	CARBON	1K	5%	1/4W
R538	1-249-417-11	CARBON	1K	5%	1/4W
R539	1-249-417-11	CARBON	1K	5%	1/4W
R540	1-249-417-11	CARBON	1K	5%	1/4W
R541	1-249-417-11	CARBON	1K	5%	1/4W
R542	1-249-417-11	CARBON	1K	5%	1/4W
R544	1-249-417-11	CARBON	1K	5%	1/4W
R545	1-249-429-11	CARBON	10K	5%	1/4W
R546	1-249-417-11	CARBON	1K	5%	1/4W
R547	1-249-429-11	CARBON	10K	5%	1/4W
R548	1-249-429-11	CARBON	10K	5%	1/4W
R549	1-249-417-11	CARBON	1K	5%	1/4W
R550	1-249-417-11	CARBON	1K	5%	1/4W
R551	1-249-435-11	CARBON	33K	5%	1/4W
R552	1-249-437-11	CARBON	47K	5%	1/4W
R553	1-249-429-11	CARBON	10K	5%	1/4W
R554	1-249-437-11	CARBON	47K	5%	1/4W
R555	1-249-429-11	CARBON	10K	5%	1/4W
R556	1-247-903-00	CARBON	1M	5%	1/4W
R561	1-249-410-11	CARBON	270	5%	1/4W
R562	1-249-411-11	CARBON	330	5%	1/4W
R563	1-249-411-11	CARBON	330	5%	1/4W
R564	1-249-411-11	CARBON	330	5%	1/4W
R565	1-249-410-11	CARBON	270	5%	1/4W
R566	1-249-411-11	CARBON	330	5%	1/4W
R567	1-249-411-11	CARBON	330	5%	1/4W
R568	1-249-411-11	CARBON	330	5%	1/4W
R569	1-249-410-11	CARBON	270	5%	1/4W
R570	1-249-410-11	CARBON	270	5%	1/4W
R571	1-249-410-11	CARBON	270	5%	1/4W
R572	1-249-410-11	CARBON	270	5%	1/4W
R573	1-249-399-11	CARBON	33	5%	1/4W
R574	1-249-399-11	CARBON	33	5%	1/4W
R575	1-249-399-11	CARBON	33	5%	1/4W
R576	1-249-399-11	CARBON	33	5%	1/4W
R577	1-249-399-11	CARBON	33	5%	1/4W
R578	1-249-411-11	CARBON	330	5%	1/4W
R579	1-249-411-11	CARBON	330	5%	1/4W
R580	1-249-411-11	CARBON	330	5%	1/4W
R581	1-249-411-11	CARBON	330	5%	1/4W
R582	1-249-411-11	CARBON	330	5%	1/4W

Ref. No.	Part No.	Description	Remark
R586	1-249-425-11	CARBON 4.7K 5%	1/4W
R588	1-249-425-11	CARBON 4.7K 5%	1/4W
R589	1-249-425-11	CARBON 4.7K 5%	1/4W
R595	1-249-437-11	CARBON 47K 5%	1/4W
R596	1-249-437-11	CARBON 47K 5%	1/4W
R597	1-249-437-11	CARBON 47K 5%	1/4W
R598	1-249-437-11	CARBON 47K 5%	1/4W
R599	1-249-417-11	CARBON 1K 5%	1/4W
R601	1-249-412-11	CARBON 390 5%	1/4W
R602	1-249-425-11	CARBON 4.7K 5%	1/4W
R603	1-249-429-11	CARBON 10K 5%	1/4W
R604	1-249-429-11	CARBON 10K 5%	1/4W
R605	1-249-401-11	CARBON 47 5%	1/4W
R607	1-247-830-11	CARBON 910 5%	1/4W
R901	1-247-747-11	CARBON 470 5%	1/2W
R911	1-247-747-11	CARBON 470 5%	1/2W
R1599	1-249-425-11	CARBON 4.7K 5%	1/4W
		< VARIABLE RESISTOR >	
RV501	1-238-459-11	RES, VAR, CARBON 100K (BALANCE)	
RV502	1-241-307-11	RES, VAR, CAREBON 10K/10K (DBFB LEVEL)	
RV601	1-238-708-21	RES, VAR, CARBON 10K/100K/100K (VOLUME)	
		< SWITCH >	
S501	1-554-303-21	SWITCH, TACTILE (EQ-REC)	
S502	1-554-303-21	SWITCH, TACTILE (TUNER)	
S503	1-554-303-21	SWITCH, TACTILE (EQ)	
S504	1-554-303-21	SWITCH, TACTILE (SURROUND MODE)	
S505	1-554-303-21	SWITCH, TACTILE (MEMORY)	
S511	1-554-303-21	SWITCH, TACTILE (DBFB)	
S512	1-554-303-21	SWITCH, TACTILE (CD)	
S513	1-554-303-21	SWITCH, TACTILE (PERSONAL FILE 1-5)	
S514	1-554-303-21	SWITCH, TACTILE (◁)	
S515	1-554-303-21	SWITCH, TACTILE (REVRSE)	
S516	1-554-303-21	SWITCH, TACTILE (SURROUND LEVEL)	
S521	1-554-303-21	SWITCH, TACTILE (EFFECT)	
S522	1-554-303-21	SWITCH, TACTILE (TAPE)	
S523	1-554-303-21	SWITCH, TACTILE (SELECT 10)	
S524	1-554-303-21	SWITCH, TACTILE (△)	
S525	1-554-303-21	SWITCH, TACTILE (FLAT)	
S526	1-554-303-21	SWITCH, TACTILE (PHONO)	
S532	1-554-303-21	SWITCH, TACTILE (VIDEO)	
S533	1-554-303-21	SWITCH, TACTILE (▽)	
S534	1-554-303-21	SWITCH, TACTILE (▷)	
S535	1-554-303-21	SWITCH, TACTILE (DISPLAY)	
S536	1-554-303-21	SWITCH, TACTILE (PROGRAM FUNKTION)	

Ref. No.	Part No.	Description	Remark
		< VIBRATOR >	
X501	1-577-359-21	VIBRATOR, CERAMIC (4.19MHz)	

****

MISCELLANEOUS
****

8	1-690-697-11	WIRE (FLAT TYPE) (23 CORE)	
⚠56	1-575-654-11	CORD, POWER (AEP, G, IT, EE)	
⚠56	1-575-669-21	CORD, POWER (UK)	
⚠F101	1-532-259-00	FUSE (T1.6A)	
⚠F103	1-532-203-00	FUSE (T2.0A)	
⚠F104	1-532-203-00	FUSE (T2.0A)	
⚠T901	1-450-812-11	TRANSFORMER, POWER	

****

ACCESSORIES & PACKING MATERIALS
****

	4-920-940-01	SHEET (A), PROTECTION	
*	4-934-859-01	CUSHION	

****

HARDWARE LIST

#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S
#2	7-621-773-93	SCREW (PANEL 2.6 TP2)
#3	7-682-548-04	SCREW +BVTT 3X8 (S)
#4	7-685-650-79	SCREW +BVTP 3X16 TYPE2 IT-3
#5	7-682-560-04	SCREW +BVTT 4X6 (S)
#6	7-621-849-00	SCREW (BV/RING)

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Sony Corporation
Audio Group

9-956-995-11

English
92B1863-1
Printed in Japan

©1992.2

Published by Customer Relations and Service Group

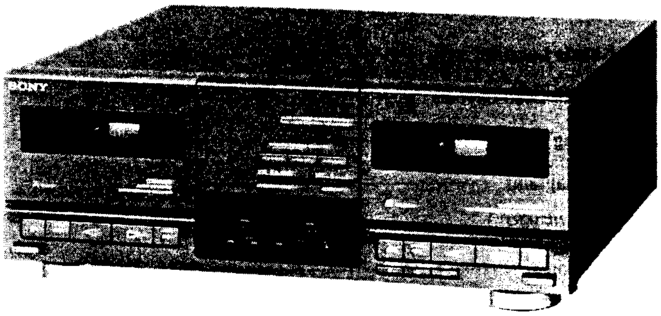
ZA200

5933

TC-D507

SERVICE MANUAL

AEP Model
UK Model
E Model
Australian Model
East European Model



• This set is the deck section in LBT-D507/D507CD/D507CDM.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol DD are trademarks of Dolby Laboratories Licensing Corporation.

Model Name Using Similar Mechanism	TC-H1600
Tape Transport Mechanism Type	DECK A : TCM-190RA12C DECK B : TCM-190RB22C

SPECIFICATIONS

Recording system	4-track 2-channel stereo
Frequency response	DOLBY NR OFF With Type IV cassette (Sony METAL-ES) 30 Hz to 15 kHz (±3 dB) With Type II cassette (Sony UX-S) 40 Hz to 14 kHz (±3 dB) With Type I cassette (Sony HF-S) 40 Hz to 14 kHz (±3 dB)
Wow and flutter	±0.2 % (DIN)
Weight	Approx. 3.4 kg
Dimensions	Approx. 355 × 131 × 304 mm (w/h/d, including projections)

Design and specifications are subject to change without notice.

Note
This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

MICROFILM

CASSETTE DECK
SONY®

5933

TABLE OF CONTENTS

Section *Title* *Page*

SECTION 1. GENERAL 3

SECTION 2. DISASSEMBLY 4

SECTION 3. MECHANICAL ADJUSTMENTS 6

SECTION 4. ELECTRICAL ADJUSTMENTS 6

SECTION 5. DIAGRAMS

5-1. Circuit Boards Location 10

5-2. Semiconductor Lead Layouts 10

5-3. Printed Wiring Boards 11

5-4. Schematic Diagrams 15

SECTION 6. EXPLODED VIEWS

6-1. Overall Section 19

6-2. Front Panel Section 20

6-3. Mechanism-1 Section 21

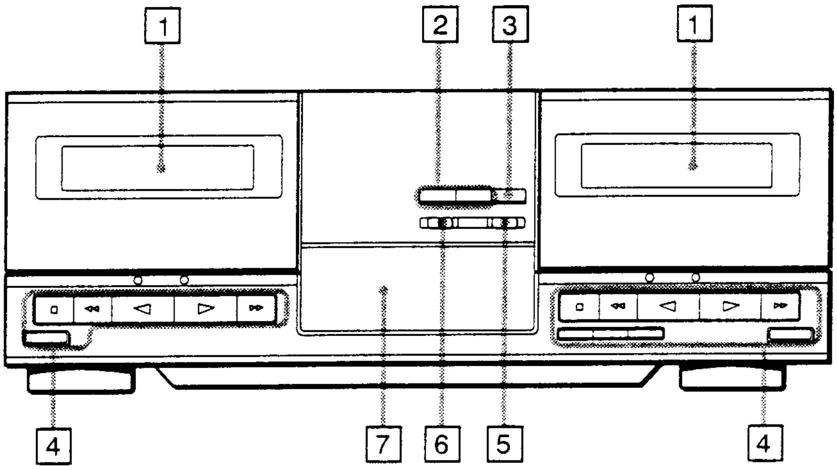
6-4. Mechanism-2 Section 22

SECTION 7. ELECTRICAL PARTS LIST 23

SECTION 1
GENERAL

This section is extracted from instruction manual.

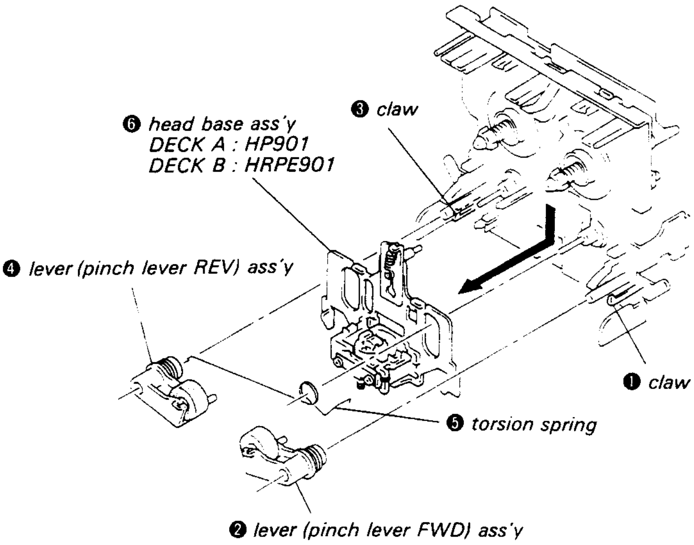
Location of Controls



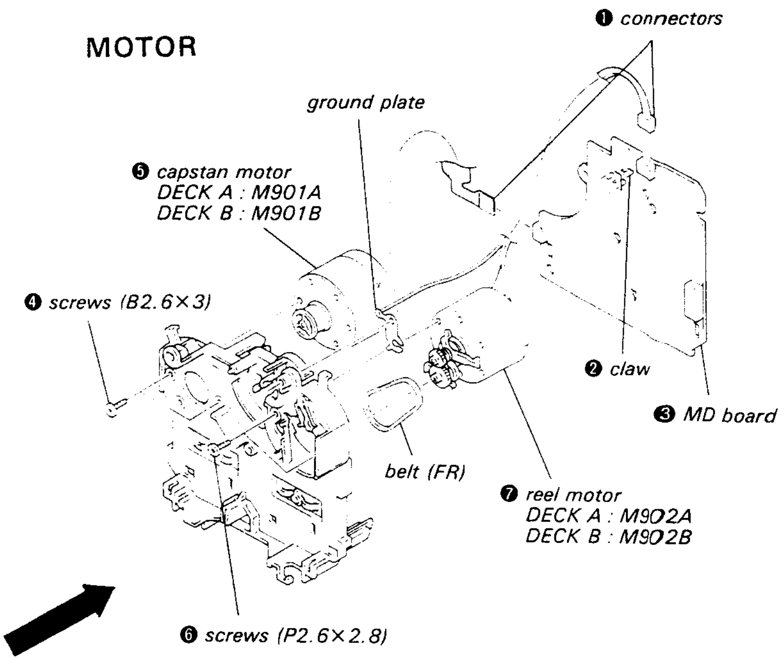
- 1 Cassette holders
- 2 SYNCHRO DUBBING buttons (44)
- 3 CD SYNCHRO button (48)
- 4 Tape operation buttons
  - ◀◀ Leftward fast winding/AMS*,
  - ▶▶ Rightward fast winding/AMS*,
  - ▶ Forward play, ◀ Reverse play,
  - ■ Stop, ⏏ Eject, ❚❚ Pause (deck B only),
  - ○ Record muting (deck B only),
  - ● Record (deck B only)
- 5 DOLBY NR (noise reduction) switch (36)
- 6 DIRECTION MODE selector (32, 36, 44, 48)
- 7 Display window

* AMS is the abbreviation of Automatic Music Sensor.

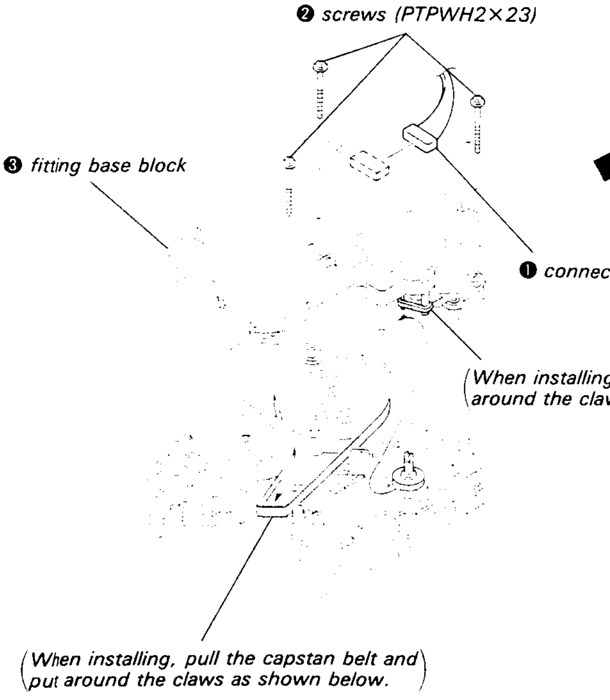
HEAD


❻ head base ass'y
DECK A : HP901
DECK B : HRPE901
❸ claw
❹ lever (pinch lever REV) ass'y
❶ claw
❺ torsion spring
❷ lever (pinch lever FWD) ass'y

MOTOR


❶ connectors
ground plate
❺ capstan motor
DECK A : M901A
DECK B : M901B
❹ screws (B2.6×3)
❷ claw
❸ MD board
belt (FR)
❼ reel motor
DECK A : M902A
DECK B : M902B
❻ screws (P2.6×2.8)

FITTING BASE BLOCK


❷ screws (PTPWH2×23)
❸ fitting base block
❶ connector

(When installing, pull the FR belt and put around the claws as shown below.)

(When installing, pull the capstan belt and put around the claws as shown below.)

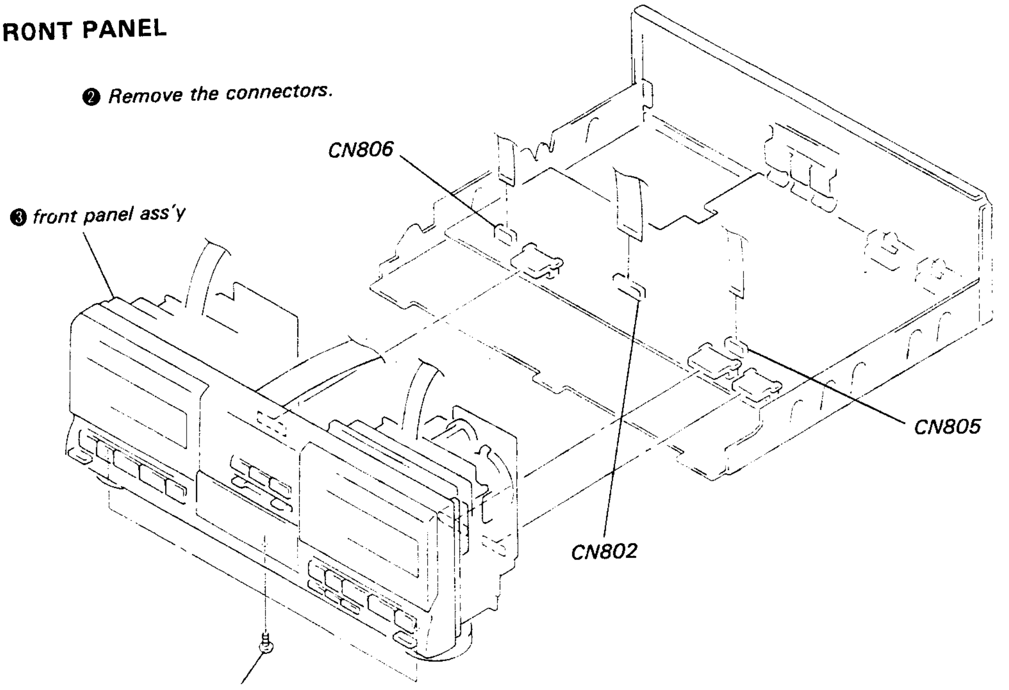
SECTION 2
DISASSEMBLY

NOTE: Follow the disassembly procedure in the numerical order given.

CASE
Unscrew the four case attachment screws M3×8 and remove the case.

FRONT PANEL

❷ *Remove the connectors.*

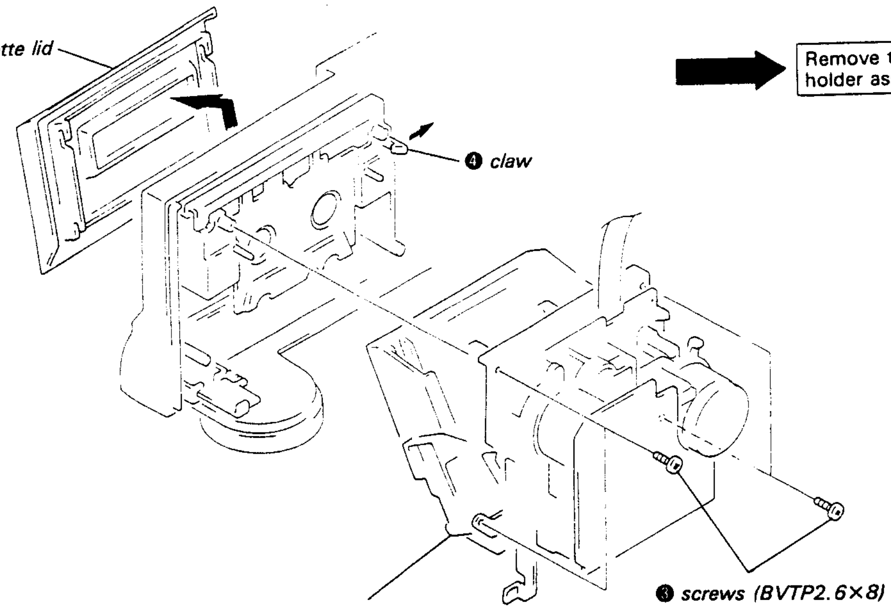


❸ *front panel ass'y*

❶ *screws (BVTP3×8)*

MECHANISM DECK

❶ *Press the EJECT button.*


❷ *cassette lid*

❹ *claw*

❸ *screws (BVTP2.6×8)*

❺ *mechanism deck*

Remove the cassette holder assembly.

SECTION 3
MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcoholmoistened swab;
   - record/playback/erase head
   - pinch roller rubber belts
   - capstan idler
2. Demagnetize the record/playback head with a head demagnetizer.
   (Head demagnetizer do not approach for the erase head.)
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed in the rated power supply voltage unless otherwise noted.

Torque Measurement

Torque	Torque meter	Meter reading
FWD	CQ-102C	35 to 60g · cm (0.49 to 0.83 oz · inch)
FWD Back tension	CQ-102C	2 to 6g·cm (0.03 to 0.08 oz·inch)
REV	CQ-102RC	35 to 60g · cm (0.49 to 0.83 oz · inch)
REV Back tension	CQ-102RC	2 to 6g·cm (0.03 to 0.08 oz·inch)
FF, REW	CQ-201B	70 to 110g · cm (0.98 to 1.52 oz · inch)

SECTION 4
ELECTRICAL ADJUSTMENTS

Note: The adjustment should be performed in the order given in the service manual. As a rule, adjustment about playback should be performed before adjustment about recording.
The adjustments should be performed for both L-CH and R-CH.

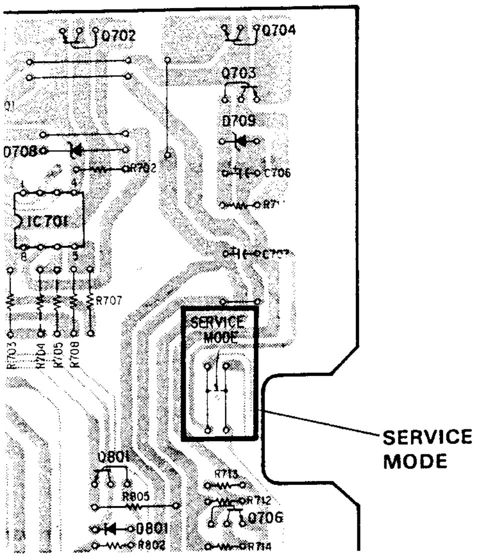
- Test Mode

The Test mode is acrivated by shorting Test Poing Service mode (IC801 64 pin changes over to "L") with the POWER switch in OFF position, then turning on the POWER switch.

In this mode, the following functions operate:

1. Source monitor
   Line mute is cancelled during recording.
2. High speed playback
   High speed playback is executed when the HIGH SPEED (DUBBING) button is jpressed during playback. Normal speed playback is restored when the button is pressed again.
3. Record memory
   The tape counter is reset to "0" at the record start point.
   After adjustment, open the Service mode to cancel the Test mode.

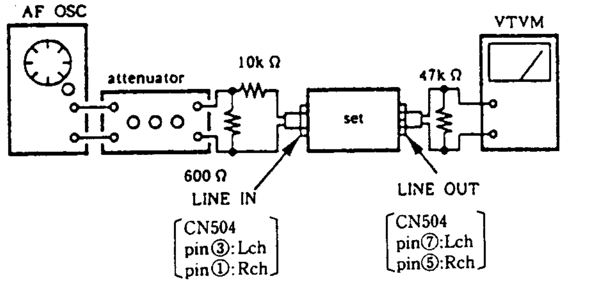
[MAIN BOARD] (CONDUCTOR SIDE)



- Switches and controls should be set as follows unless otherwise specified.
  DD NR switch : OFF
  DIR MODE switch : ⇄

- Standard Record:
  Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

- Record Mode -


AF OSC
attenuator
10k Ω
600 Ω
LINE IN
CN504
pin③:Lch
pin①:Rch
set
47k Ω
VTVM
LINE OUT
CN504
pin⑦:Lch
pin⑤:Rch

Standard Input Level

input terminal	LINE IN
source impedance	10kΩ
input level	0.25V (−10dB)

Standard Output Level

output terminal	LINE OUT
load impedance	47kΩ
output level	0.44V (−5dB)

Test tape

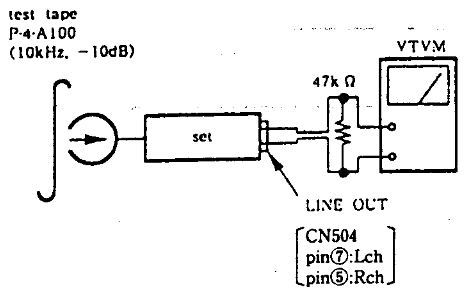
Type	Signal	Used for
P-4-A100	10kHz, −10dB	Azimuth Adjustment
P-4-L300	315Hz, 0dB	PB Level Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

Record/Playback Head Azimuth Adjustment

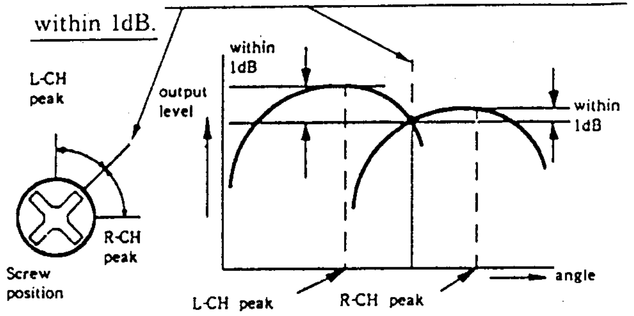
DECK A **DECK B**

Procedure :

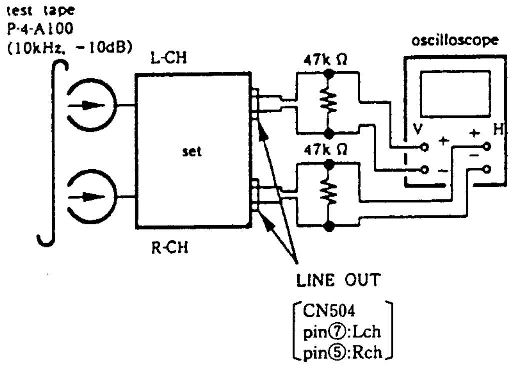
1. Mode: FWD playback

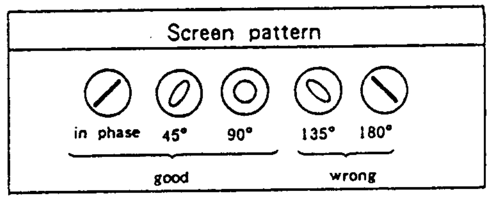

test tape
P-4-A100
(10kHz, −10dB)
set
47k Ω
VTVM
LINE OUT
CN504
pin⑦:Lch
pin⑤:Rch

2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1dB.


L-CH peak
output level
within 1dB
within 1dB
R-CH peak
Screw position
L-CH peak
R-CH peak
angle

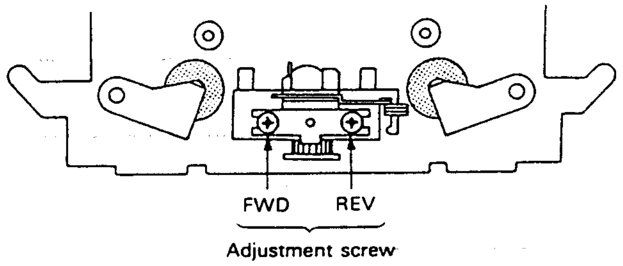
3. Phase Check
   Mode: playback


test tape
P-4-A100
(10kHz, −10dB)
L-CH
R-CH
set
47k Ω
47k Ω
oscilloscope
V
H
LINE OUT
CN504
pin⑦:Lch
pin⑤:Rch


Screen pattern
in phase
45°
90°
135°
180°
good
wrong

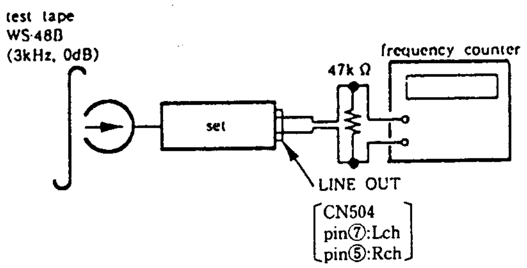
4. Set in the REV mode and repeat the step 1-3.
5. After the adjustment, lock the screws with locking compound.

Adjustment Location : Record/playback head


FWD
REV
Adjustment screw

Tape Speed Adjustment DECK A DECK B

Procedure :
Mode: playback


test tape
WS-48B
(3kHz, 0dB)
set
47k Ω
frequency counter
LINE OUT
CN504
pin⑦:Lch
pin⑤:Rch

Perform high speed adjustment before normal speed adjustment.

(High speed adjustment)

1. Continue pressing the SYNCHRO DUBBING HIGH SPEED switch.
2. Check that frequency counter reading is within the standard value 6,000±60Hz.
3. If out of the standard, adjust each RV72 so that the frequency counter reading satisfies 6,000±60Hz on both A and B decks.
4. Change over to Rev playback status, and repeat the above steps 1 to 3.

(Normal speed adjustment)

1. Continue pressing the SYNCHRO DUBBING NORM SPEED switch.
2. Check that the frequency counter reading is within the standard value 3,000±30Hz.
3. If out of the standard, adjust each RV71 so that the frequency counter reading satisfies 3,000±30Hz on both A and B decks.
4. Change over to REV playback status, and repeat the above steps 1 to 3.

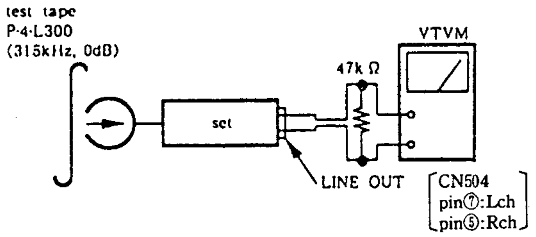
Frequency difference between the beginning and the end of the tape should be within 3%.
Frequency difference between deck A and deck B the beginning of the tape should be within 1.0%.

Adjustment Location :
MD-A, MD-B board

Playback Level Adjustment

DECK A **DECK B**

Procedure :
Mode: playback


test tape
P-4-L300
(315kHz, 0dB)
set
47k Ω
VTVM
LINE OUT
CN504
pin⑦:Lch
pin⑤:Rch

Adjust RV11 (L-CH), RV21 (R-CH) so that the reading on VTVM meets the adjustment limits below.

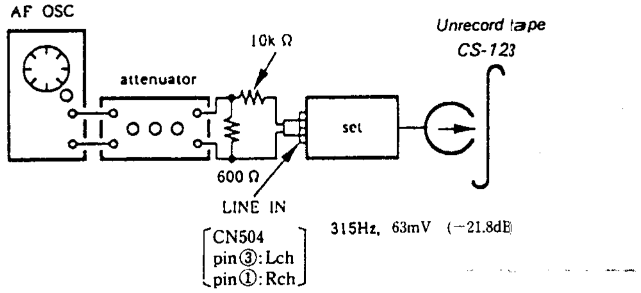
Adjustment Limits :
LINE OUT level: −7.7±0.5dB (0.30−0.33V)
Level difference between channels: less than 0.5dB
Check that the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

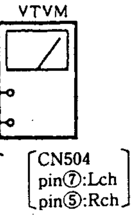
Adjustment Location : MD-A, MD-B board

Record Bias Adjustment DECK B

Setting :
REC LEVEL control : Standard Record (See page 7).

Procedure :
1. Mode : record


AF OSC
attenuator
10k Ω
600 Ω
LINE IN
CN504
pin③:Lch
pin①:Rch
set
Unrecord tape
CS-123
315Hz, 63mV (−21.8dB)


VTVM
CN504
pin⑦:Lch
pin⑤:Rch

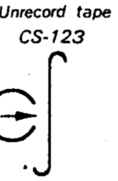
ne reading on

0.33V)
s than 0.5dB
ot change in
rom playback

rd

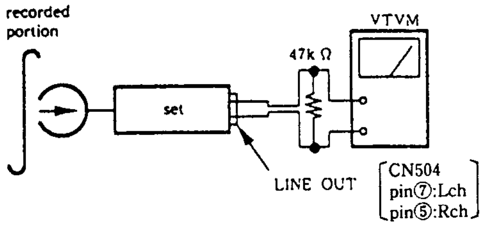
3]

ee page 7).


Unrecord tape
CS-123

(−21.8dB)

2. Mode : playback


recorded
portion
set
47k Ω
VTVM
LINE OUT
CN504
pin⑦:Lch
pin⑤:Rch

Playback the signal recorded in step 1.
Confirm that the 10kHz playback output is 0±0.5dB relative to the 315Hz output. If necessary, adjust RV12 (L-CH), RV22 (R-CH) and repeat the steps given above.

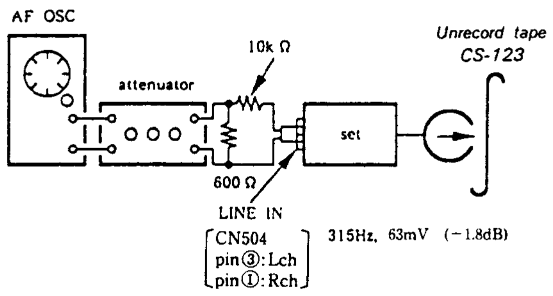
Adjustment Location : MD-B board

Record Level Adjustment DECK B

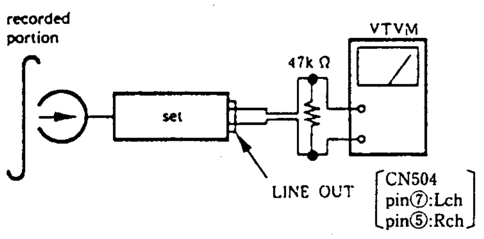
Setting :
REC LEVEL control : Standard Record (See page 7).

Procedure :

1. Mode: record


AF OSC
attenuator
10k Ω
600 Ω
set
Unrecord tape
CS-123
LINE IN
CN504
pin③:Lch
pin①:Rch
315Hz, 63mV (−1.8dB)

2. Mode: playback


recorded
portion
set
47k Ω
VTVM
LINE OUT
CN504
pin⑦:Lch
pin⑤:Rch

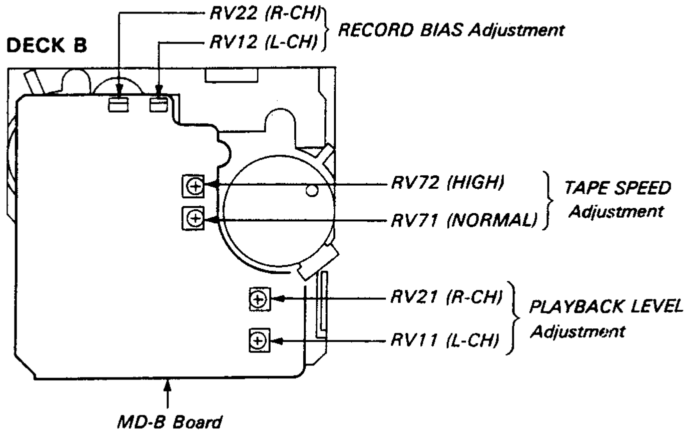
3. Playback the signal recorded in step 1.
Confirm that the signal level is within the adjustment limits below. If necessary, adjust RV101 (L-CH), RV201 (R-CH) and repeat the step 1-2.

Adjustment Limits : −3.8dB±0.5dB (0.47−0.53V)

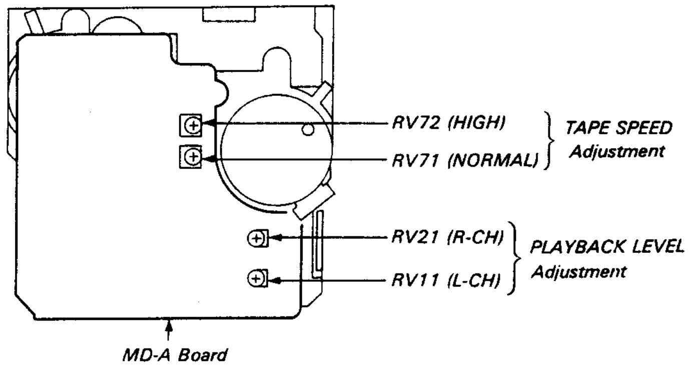
Adjustment Location : MAIN board (component side)

–Adjustment Parts Location Diagrams–

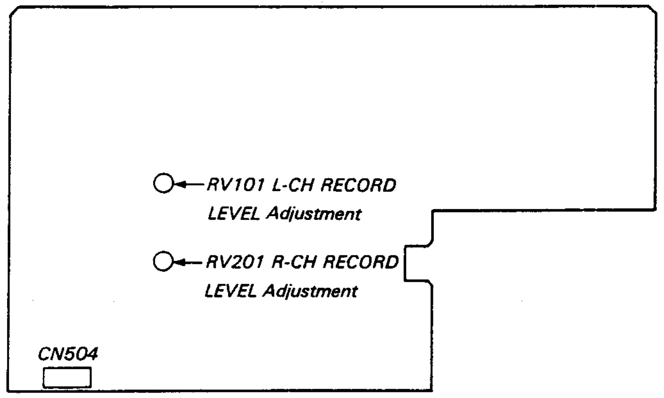
DECK B


RV22 (R-CH)
RV12 (L-CH)
RECORD BIAS Adjustment
RV72 (HIGH)
RV71 (NORMAL)
TAPE SPEED Adjustment
RV21 (R-CH)
RV11 (L-CH)
PLAYBACK LEVEL Adjustment
MD-B Board

DECK A

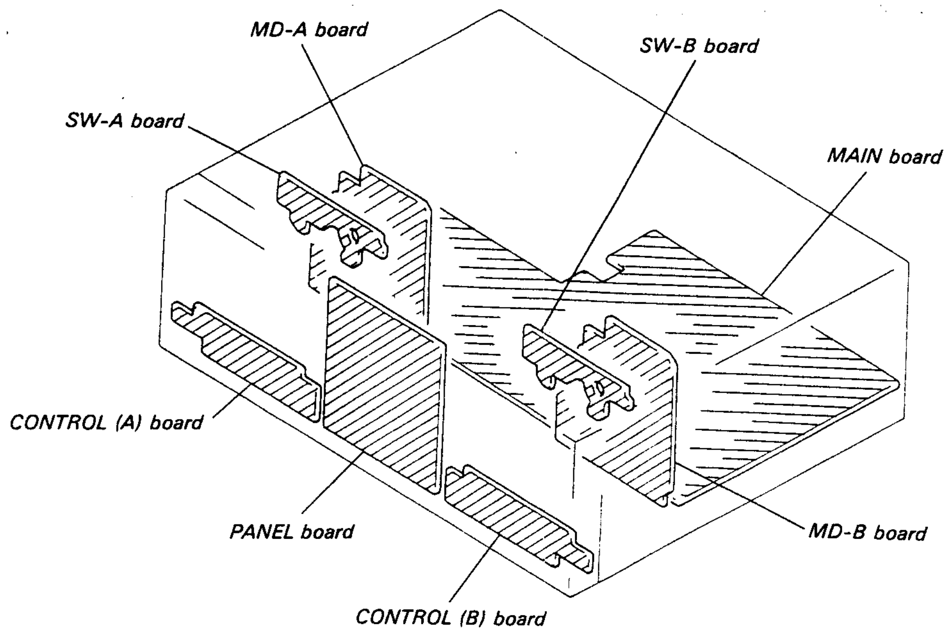

RV72 (HIGH)
RV71 (NORMAL)
TAPE SPEED Adjustment
RV21 (R-CH)
RV11 (L-CH)
PLAYBACK LEVEL Adjustment
MD-A Board

MAIN BOARD (COMPONENT SIDE)


RV101 L-CH RECORD LEVEL Adjustment
RV201 R-CH RECORD LEVEL Adjustment
CN504

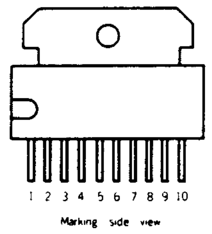
SECTION 5
DIAGRAMS

5-1. CIRCUIT BOARDS LOCATION

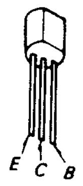

MD-A board
SW-B board
SW-A board
MAIN board
CONTROL (A) board
PANEL board
MD-B board
CONTROL (B) board

5-2. SEMICONDUCTOR LEAD LAYOUTS

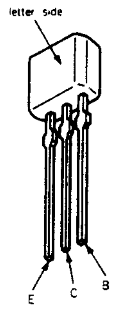
TA7272P


1 2 3 4 5 6 7 8 9 10
Marking side view

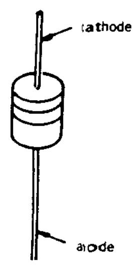
2SB1013-4



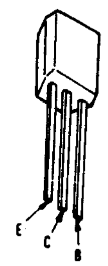
DTC144ES


letter side
E C B

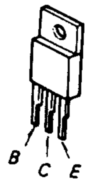
HZS6A1N
UZL-7L2


cathode
anode

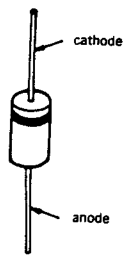
2SA1317-STU
2SC2603-EF
DTA114ES
DTA144ES
DTC143TS



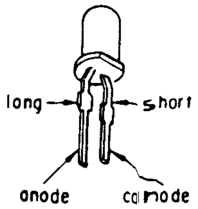
2SB1094-LK
2SD2012



1N4148M
10E2N


cathode
anode

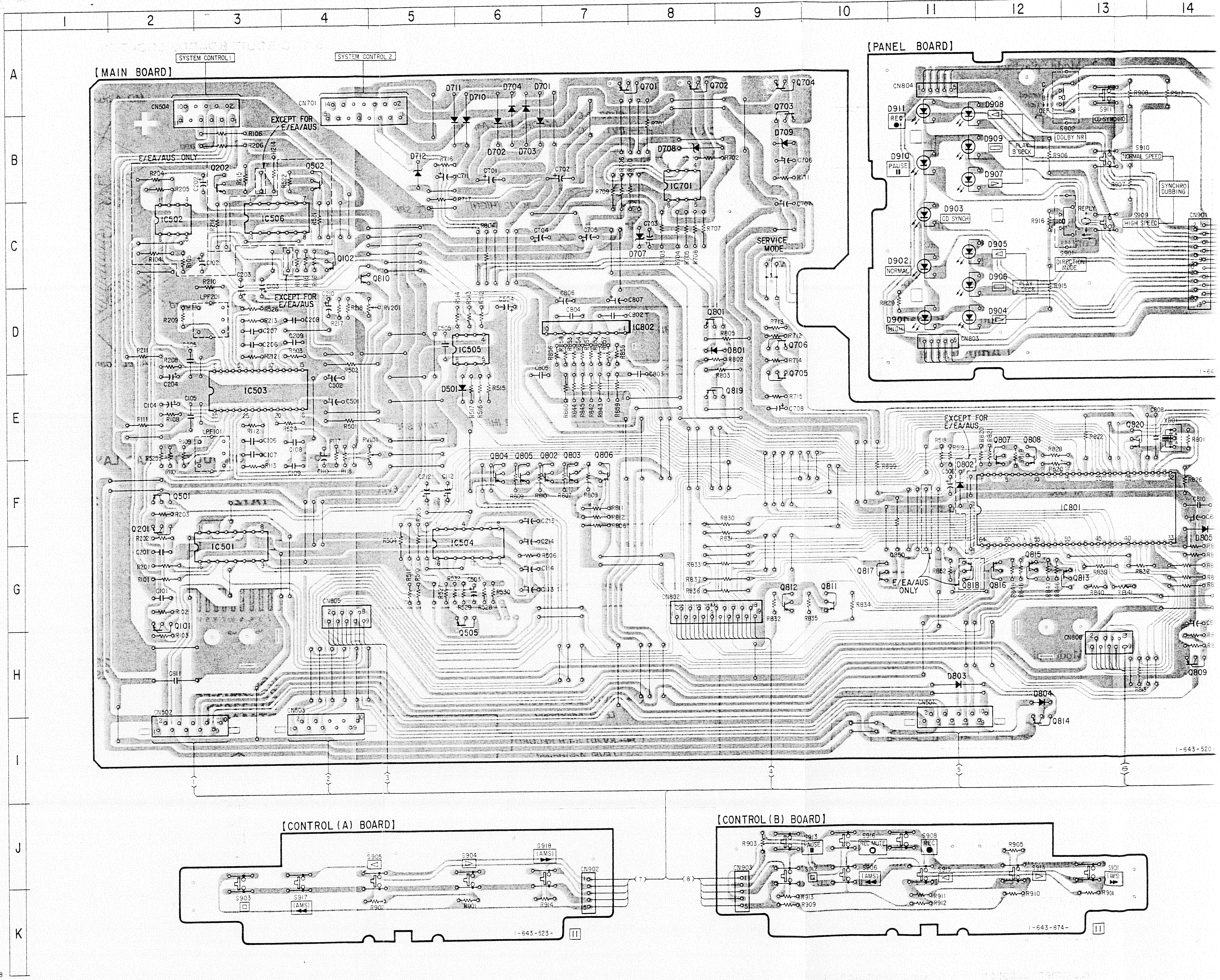
SEL2210S-C
SEL2410E-D
SEL2910A-C


long
short
anode
cathode

5-3. PRINTED WIRING BOARDS

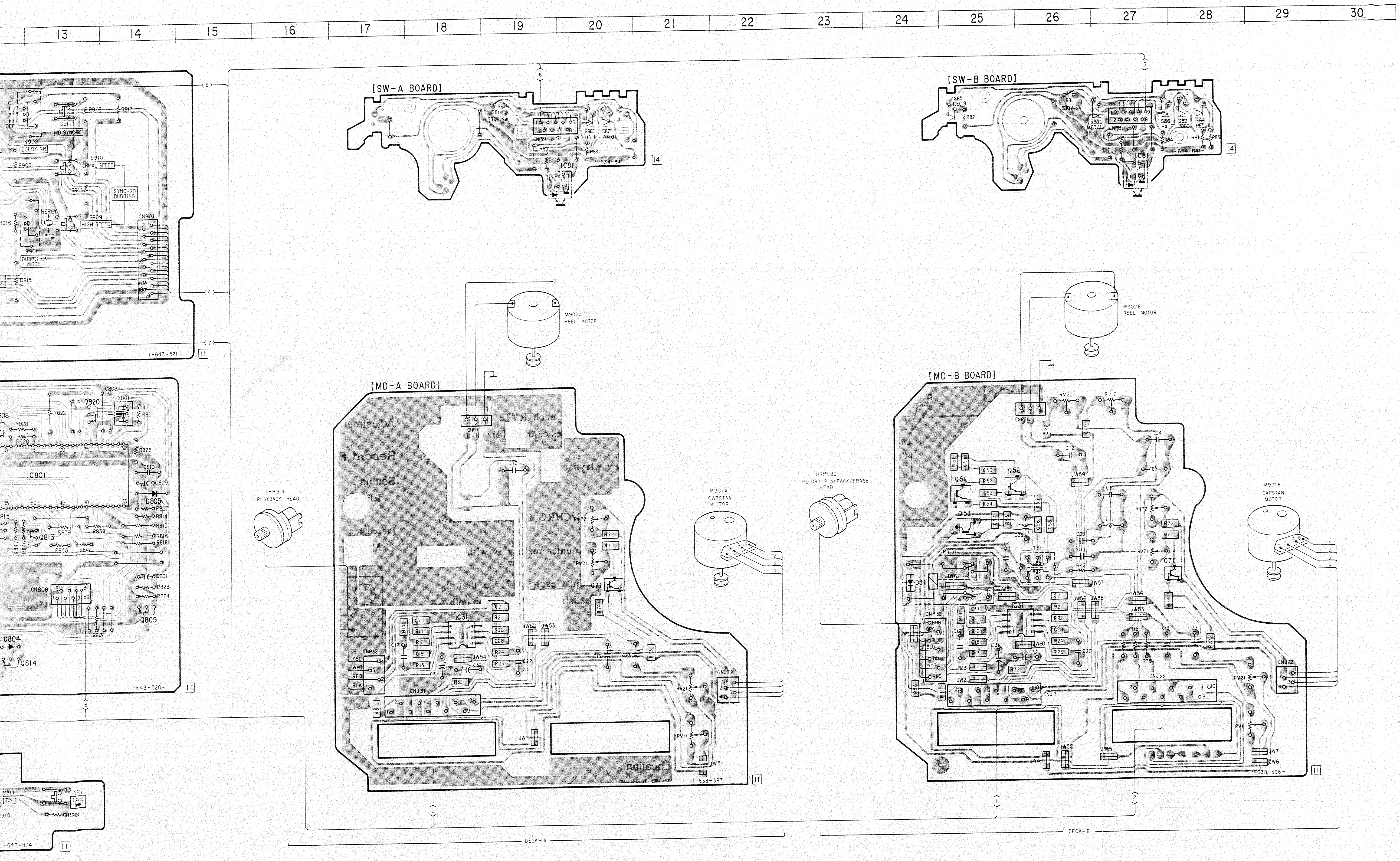
- **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D31	H-24	Q51	G-25
D501	E-6	Q52	G-25
D701	B-6	Q53	G-25
D702	B-6	Q71(MD-A)	H-20
D703	B-6	Q71(MD-B)	H-28
D704	B-6	Q101	G-2
D707	C-8	Q102	C-4
D708	B-8	Q201	F-2
D709	B-9	Q202	B-3
D710	B-6	Q501	F-2
D711	B-5	Q502	B-4
D712	B-5	Q505	G-6
D801	D-9	Q701	A-8
D802	F-11	Q702	A-8
D803	H-11	Q703	B-9
D804	H-12	Q704	A-9
D805	F-14	Q705	E-9
D901	D-11	Q706	D-9
D902	C-11	Q801	D-9
D903	C-11	Q802	F-7
D904	D-11	Q803	F-7
D905	C-11	Q804	F-6
D906	D-11	Q805	F-6
D907	B-11	Q806	F-7
D908	B-11	Q807	F-12
D909	B-11	Q808	F-12
D910	B-11	Q809	H-14
D911	B-11	Q810	C-4
		Q811	G-10
IC31(MD-A)	H-19	Q812	G-9
IC31(MD-B)	H-26	Q813	G-13
IC81(SW-A)	B-20	Q814	I-12
IC81(SW-B)	B-27	Q815	G-12
IC501	G-3	Q816	G-12
IC502	C-2	Q817	G-10
IC503	E-3	Q818	G-11
IC504	G-6	Q819	E-9
IC505	D-6	Q820	E-13
IC506	C-3		
IC701	B-8		
IC801	F-13		
IC802	D-6		

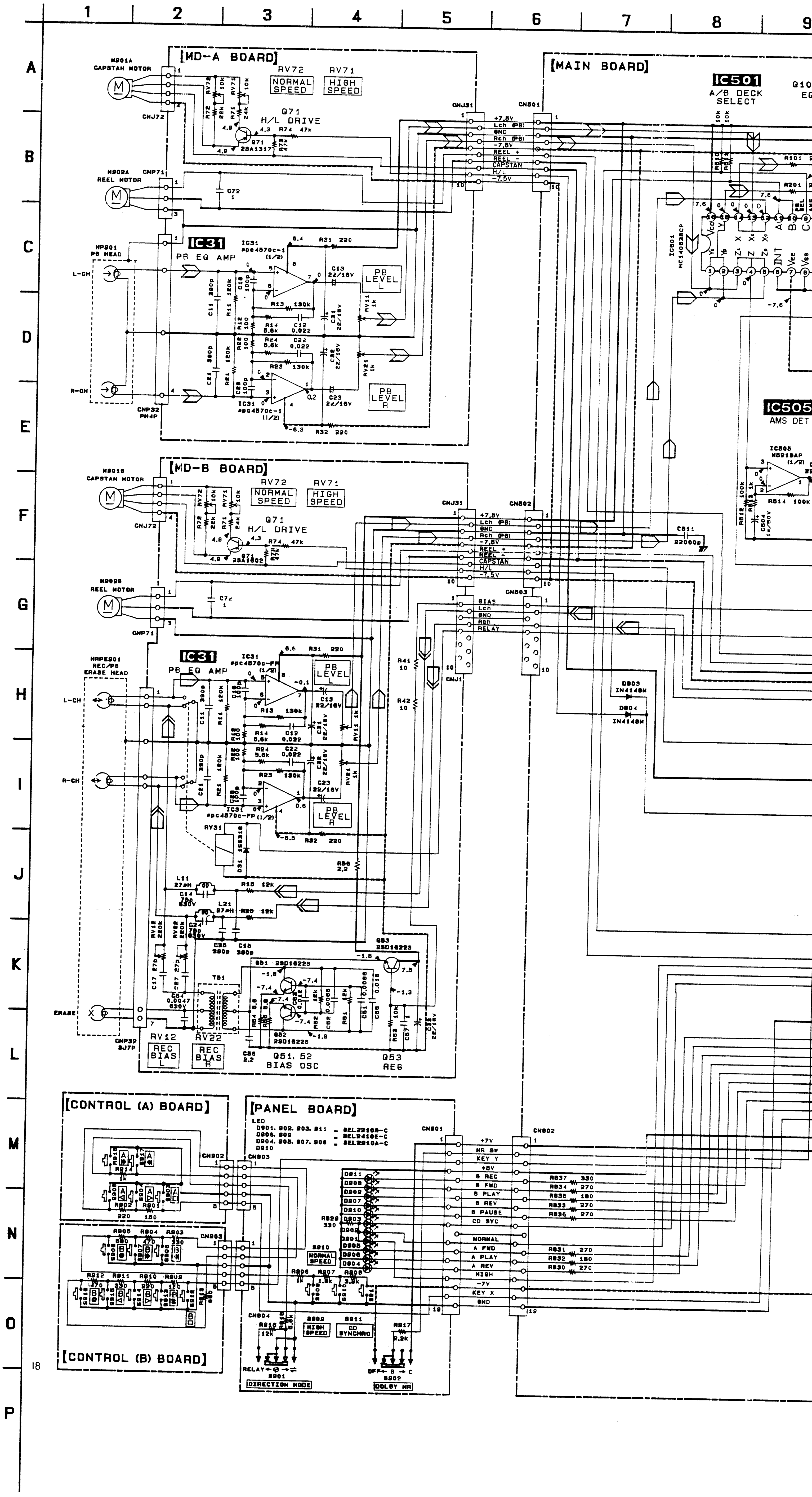

1
2
3
4
5
6
7
8
9
10
11
12
13
14
A
B
C
D
E
F
G
H
I
J
K
[MAIN BOARD]
[PANEL BOARD]
[CONTROL (A) BOARD]
[CONTROL (B) BOARD]
SYSTEM CONTROL 1
SYSTEM CONTROL 2
EXCEPT FOR E/EA/AUS
E/EA/AUS ONLY
SERVICE MODE
CN504
CN701
IC502
IC506
IC503
IC501
IC504
IC505
IC701
IC802
IC801
CN805
CN802
CN502
CN503
CN501
CN806
CN804
CN803
CN901
CN902
CN903
REC
PAUSE
NORMAL
HIGH
CD SYNCH
PLAY B DECK
PLAY A DECK
DOLBY NR
NORMAL SPEED
SYNCHRO DUBBING
HIGH SPEED
DIRECTION MODE
REPLAY
AMS
REC MUTE
1-643-520
1-643-523-
1-643-674-

Note:
- ○—— : parts extracted from the component side.

EA: Saudi Arabia
AUS: Australian


13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
[SW-A BOARD]
[SW-B BOARD]
[MD-A BOARD]
[MD-B BOARD]
S911
CD-SYNCHRO
S902
DOLBY NR
S910
NORMAL SPEED
SYNCHRO DUBBING
S909
HIGH SPEED
REPLY
S901
DIRECTION MODE
CN901
1-643-521-
1-643-520-
1-643-874-
IC801
Q820
X801
D805
Q813
CN808
Q809
D804
Q814
S914
S907
AMS
S81 STOP SW
S86 HALF
S82 70EQ
S85 REC B
S83 METAL
S84 REC
CNP81
IC81
1-634-841-
M902A REEL MOTOR
M902B REEL MOTOR
HP901 PLAYBACK HEAD
HRPE901 RECORD/PLAYBACK/ERASE HEAD
M901A CAPSTAN MOTOR
M901B CAPSTAN MOTOR
CNP71
IC31
CNP32
CNJ31
CNJ33
CNJ72
RV71
RV72
RV11
RV21
RV12
RV22
Q71
Q51
Q52
Q53
D31
T51
1-638-397-
1-638-396-
DECK-A
DECK-B
11
14

5-4. SCHEMATIC DIAGRAM

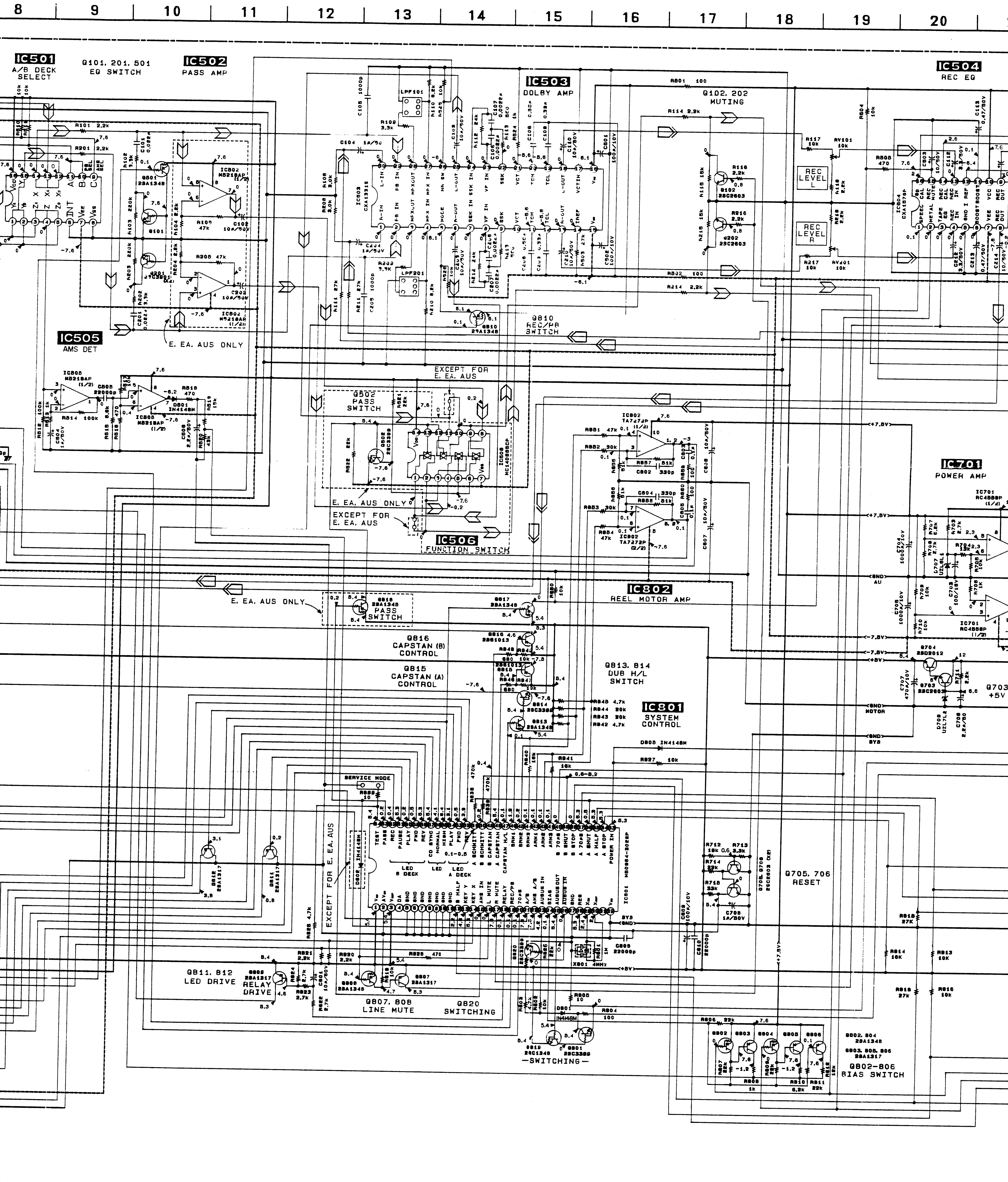


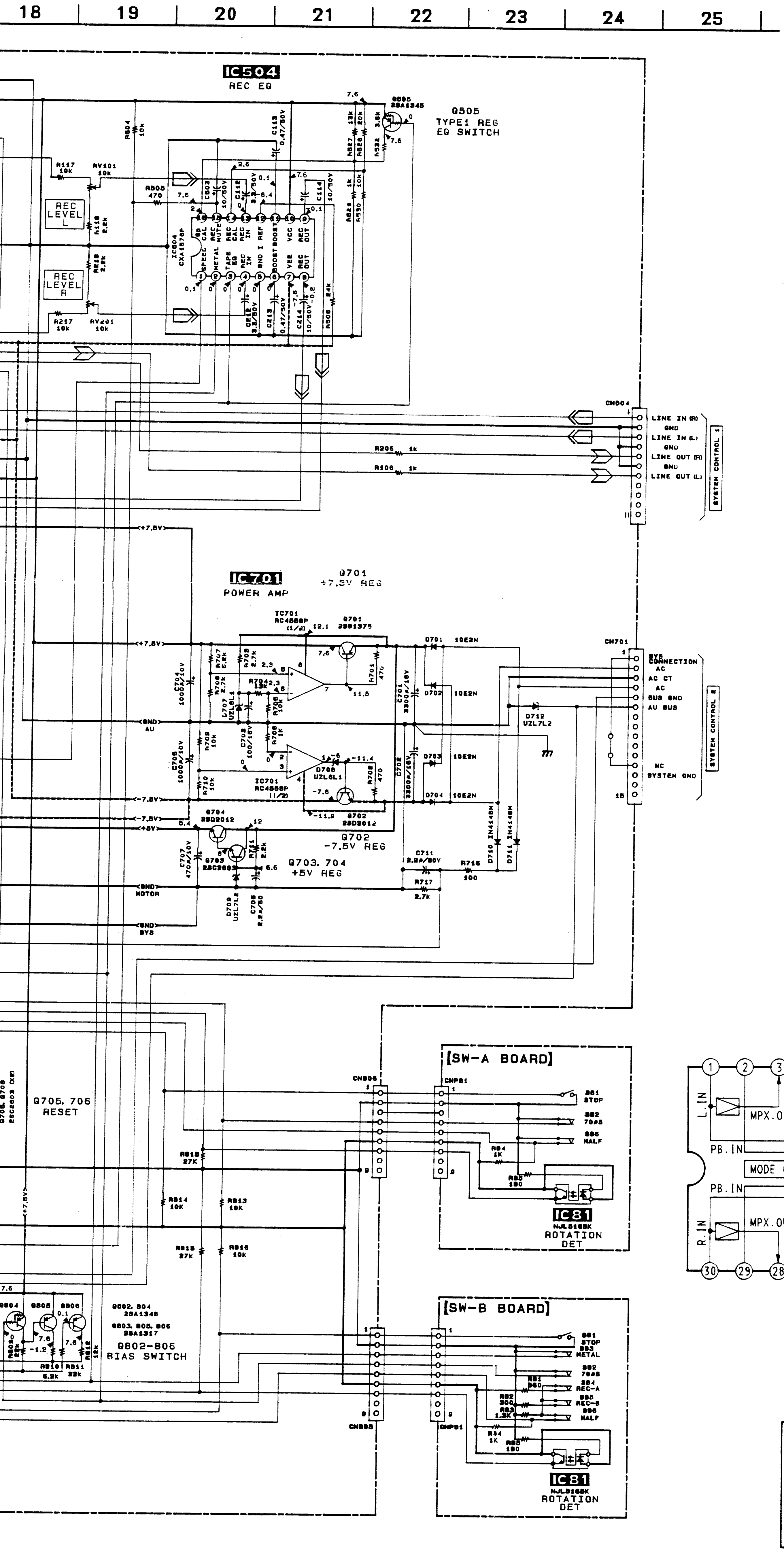
1 2 3 4 5 6 7 8 9
A B C D E F G H I J K L M N O P
[MD-A BOARD]
M901A CAPSTAN MOTOR
M902A REEL MOTOR
HP901 PB HEAD
RV72 NORMAL SPEED
RV71 HIGH SPEED
Q71 H/L DRIVE
Q71 2SA1317
IC31 PB EQ AMP
IC31 μPC4570C-1 (1/2)
PB LEVEL L
PB LEVEL R
CNJ72
CNP71
CNP32 PH4P
CNJ31
CN501
[MAIN BOARD]
IC501 A/B DECK SELECT
IC501 MC14053BCP
IC505 AMS DET
IC505 M5218AP (1/2)
[MD-B BOARD]
M901B CAPSTAN MOTOR
M902B REEL MOTOR
HRPE901 REC/PB ERASE HEAD
IC31 μPC4570C-FP (1/2)
Q71 2SA1602
RY31
L11 27mH
L21 27mH
T51
Q51 2SD1622S
Q52 2SD1622S
Q53 2SD1622S
Q51, 52 BIAS OSC
Q53 REG
RV12 REC BIAS L
RV22 REC BIAS R
CNP32 SJ7P
CN502
CN503
D503 1N4148M
D504 1N4148M
C511 22000p
+7.5V
Lch (PB)
GND
Rch (PB)
-7.5V
REEL +
REEL -
CAPSTAN
H/L
BIAS
RELAY
ERASE
L-CH
R-CH
[CONTROL (A) BOARD]
[CONTROL (B) BOARD]
[PANEL BOARD]
LED
D901, 902, 903, 911 : SEL2210S-C
D906, 909 : SEL2410E-C
D904, 905, 907, 908 : SEL2910A-C
D910
CN901
CN902
CN903
CN904
CN801
CN802
+7V
NR SW
KEY Y
+5V
B REC
B FWD
B PLAY
B REV
B PAUSE
CD SYC
NORMAL
A FWD
A PLAY
A REV
HIGH
-7V
KEY X
GND
S910 NORMAL SPEED
S909 HIGH SPEED
S911 CD SYNCHRO
S901 DIRECTION MODE
RELAY
S902 DOLBY NR
OFF B C
18

Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▬ : B+ Line
- ▬ : B– Line
- ▭ : adjustment for repair.
- Voltage is dc with respect to ground under no-signal (detuned) conditions.
  no mark: REC
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  - ⊳ : PB (DECK A)
  - ▷ : PB (DECK B)
  - ▷» : REC (DECK B)

EA: Saudi Arabia
AUS: Australian

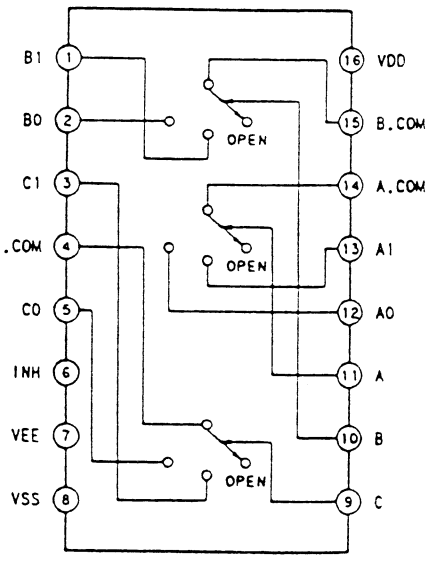

8
9
10
11
12
13
14
15
16
17
18
19
20
IC501
A/B DECK SELECT
Q101, 201, 501
EQ SWITCH
IC502
PASS AMP
IC503
DOLBY AMP
Q102, 202
MUTING
IC504
REC EQ
REC LEVEL L
REC LEVEL R
IC505
AMS DET
E. EA. AUS ONLY
Q810
REC/PB SWITCH
EXCEPT FOR E. EA. AUS
Q502
PASS SWITCH
E. EA. AUS ONLY
EXCEPT FOR E. EA. AUS
IC506
FUNCTION SWITCH
IC802
REEL MOTOR AMP
IC701
POWER AMP
E. EA. AUS ONLY
Q818
PASS SWITCH
Q816
CAPSTAN (B) CONTROL
Q815
CAPSTAN (A) CONTROL
Q813, 814
DUB H/L SWITCH
IC801
SYSTEM CONTROL
Q703
+5V
SERVICE MODE
EXCEPT FOR E. EA. AUS
Q705, 706
RESET
Q811, 812
LED DRIVE
RELAY DRIVE
Q807, 808
LINE MUTE
Q820
SWITCHING
-SWITCHING-
Q802-806
BIAS SWITCH



18
19
20
21
22
23
24
25
IC504
REC EQ
Q505
TYPE1 REG
EQ SWITCH
REC LEVEL L
REC LEVEL R
R117 10k
RV101 10k
R217 10k
RV201 10k
IC504 CXA1578P
CN504
LINE IN (R)
GND
LINE IN (L)
GND
LINE OUT (R)
GND
LINE OUT (L)
SYSTEM CONTROL 1
R206 1k
R106 1k
IC701
POWER AMP
Q701
+7.5V REG
IC701 RC4558P
CN701
SYS CONNECTION
AC
AC CT
AC
SUB GND
AU SUB
NC
SYSTEM GND
SYSTEM CONTROL 2
Q702
-7.5V REG
Q703, 704
+5V REG
Q705, 706
RESET
[SW-A BOARD]
CN806
CNP81
S81 STOP
S82 70μS
S86 HALF
IC81
NJL5165K
ROTATION DET
[SW-B BOARD]
CN808
S81 STOP
S83 METAL
S82 70μS
S84 REC-A
S85 REC-B
S86 HALF
IC81
NJL5165K
ROTATION DET
Q802, 804 2SA1348
Q803, 805, 806 2SA1317
Q802–806
BIAS SWITCH

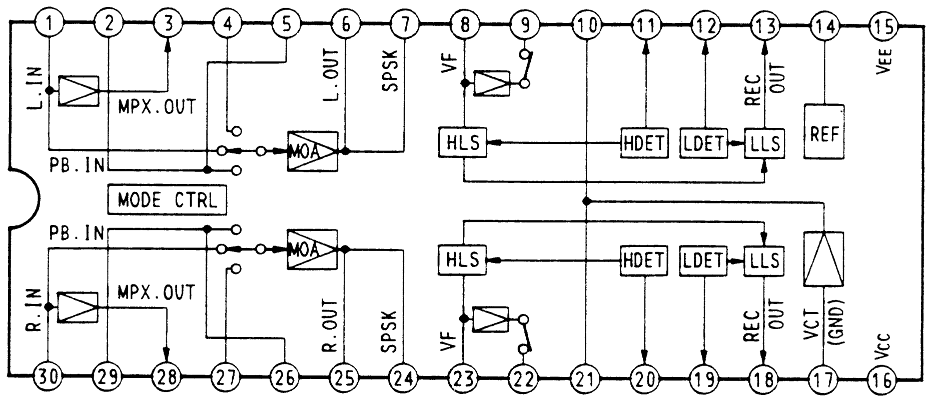
• IC Block Diagrams

IC501 μPD4053BC



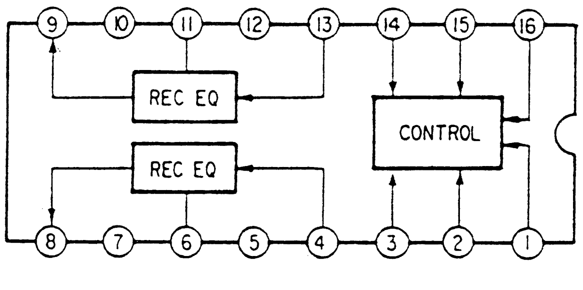
B1
B0
C1
C.COM
C0
INH
VEE
VSS
VDD
B.COM
A.COM
A1
A0
A
B
C
OPEN
OPEN
OPEN

IC503 CXA1331S



L.IN
MPX.OUT
L.OUT
SPSK
VF
REC OUT
VEE
PB.IN
MOA
HLS
HDET
LDET
LLS
REF
MODE CTRL
PB.IN
MOA
HLS
HDET
LDET
LLS
R.IN
MPX.OUT
R.OUT
SPSK
VF
REC OUT
VCT (GND)
Vcc

IC504 CXA1578P



REC EQ
REC EQ
CONTROL

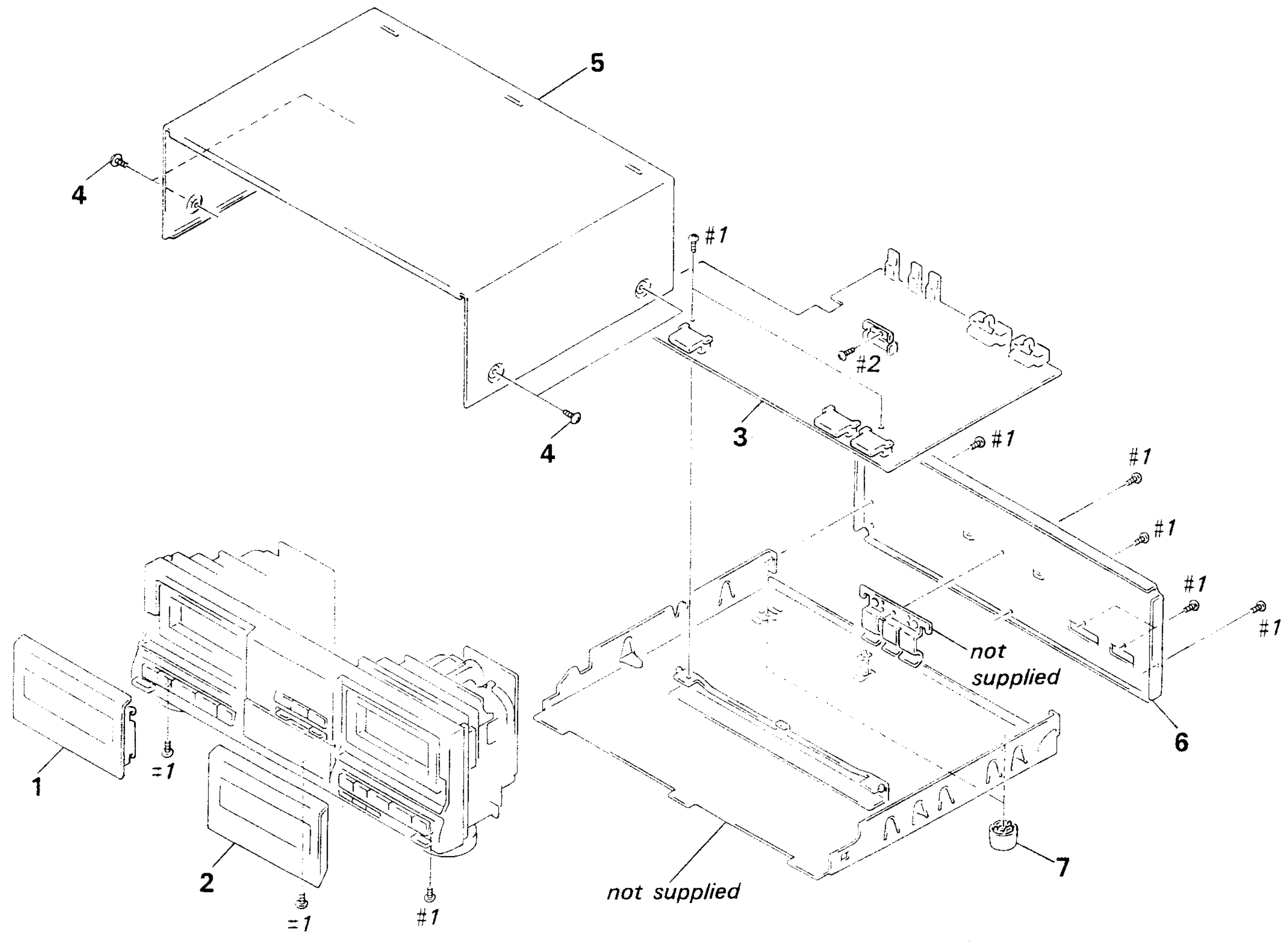
SECTION 6
EXPLODED VIEWS

NOTE:
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE(WHITE)...(RED)
  ↑ ↑
  Parts color Cabinet's color

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- hardware (#mark) list is given in the last of this parts list.

G : Germany
IT : Italian
EE : East European
EA : Saudi Arabia
AUS : Australian

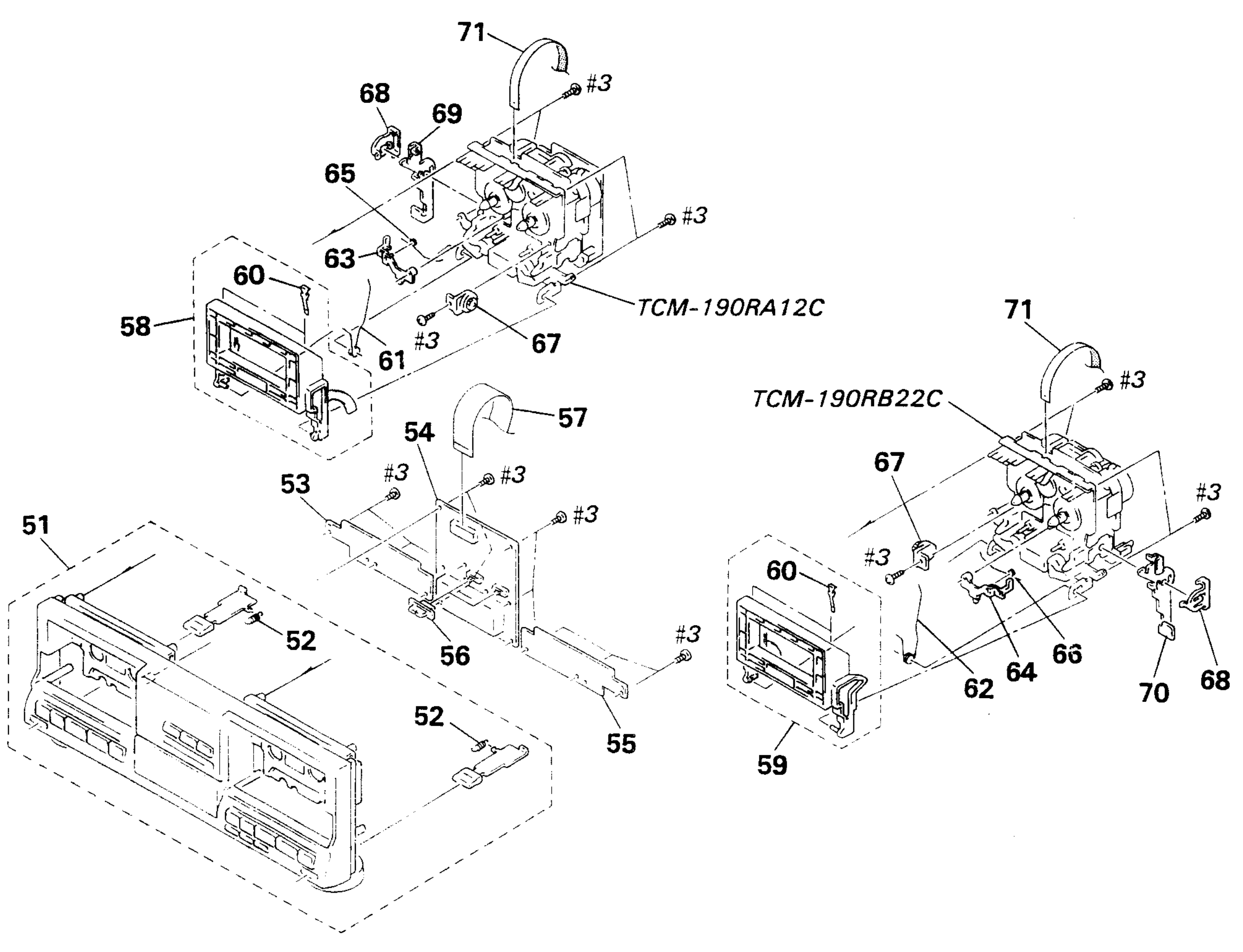
6-1. OVERALL SECTION



Ref. No.	Part No.	Description	Remark
1	X-3364-710-1	LID (A) ASSY, CASSETTE (AEP, G, EE, UK, E, EA, AUS)	
1	X-3364-711-1	LID (A) ASSY, CASSETTE (IT)	
2	X-3364-712-1	LID (B) ASSY, CASSETTE (AEP, G, EE, UK, E, EA, AUS)	
2	X-3364-713-1	LID (B) ASSY, CASSETTE (IT)	
* 3	A-2006-741-A	MAIN BOARD, COMPLETE (AEP, G, IT, EE, UK)	

Ref. No.	Part No.	Description	Remark
* 3	A-2006-742-A	MAIN BOARD, COMPLETE (E, EA, AUS)	
4	3-363-099-01	SCREW (CASE +3X8 TP2)	
* 5	4-939-803-31	CASE (AEP, G, EE, UK, E, EA, AUS)	
* 5	4-939-803-71	CASE (IT)	
* 6	3-377-136-11	PANEL, BACK (AEP, IT, EE, UK, E, EA, AUS)	
* 6	3-377-136-21	PANEL, BACK (G)	
7	4-931-169-01	FOOT	

6-2. FRONT PANEL SECTION



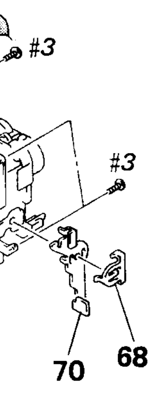
Ref. No.	Part No.	Description	Remark
51	X-3364-706-1	PANEL ASSY, FRONT (AEP, G, EE, UK, E, EA, AUS)	
51	X-3364-707-1	PANEL ASSY, FRONT (IT)	
52	3-662-752-21	SPRING, TENSION	
* 53	1-643-523-11	CONTROL (A) BOARD	
* 54	1-643-521-11	PANEL BOARD	
* 55	1-643-874-11	CONTROL (B) BOARD	
56	3-377-110-01	KNOB (SLIDE) (AEP, G, EE, UK, E, EA, AUS)	
56	3-377-110-11	KNOB (SLIDE) (IT)	
57	1-590-237-11	WIRE, FLAT TYPE (19 CORE)	
58	X-3340-194-1	HOLDER (L) ASSY, CASSETTE	
59	X-3340-195-1	HOLDER (R) ASSY, CASSETTE	
60	3-308-823-11	SPRING	

Ref. No.	Part No.	Description	Remark
61	3-354-959-01	SPRING (LOADING L), TORSION	
62	3-354-960-01	SPRING (LOADING R), TORSION	
63	3-354-955-01	LEVER (EJ SAFTY LEVER L)	
64	3-354-956-01	LEVER (EJ SAFTY LEVER R)	
65	3-354-961-01	SPRING (EJ SAFTY SPRING L)	
66	3-354-962-01	SPRING (EJ SAFTY SPRING R)	
67	3-354-963-01	DAMPER	
68	3-354-957-01	JOINT (LOCK LEVER)	
* 69	3-363-638-01	LEVER (LOCK LEVER L)	
* 70	3-363-639-01	LEVER (LOCK LEVER R)	
71	1-690-906-11	WIRE (FLAT TYPE) (9 CORE)	

6-3. MECHA

(TCM-19
(TCM-19

Ref. No.	Part N
101	3-359-
102	3-356-
103	X-3359-
104	3-356-
105	X-3359-
106	X-3359-
107	3-359-
108	X-3359-
108	X-3364-
109	X-3359-
110	3-359-
111	3-359-
* 112	3-359-
113	3-359-
114	3-575-3
115	3-359-

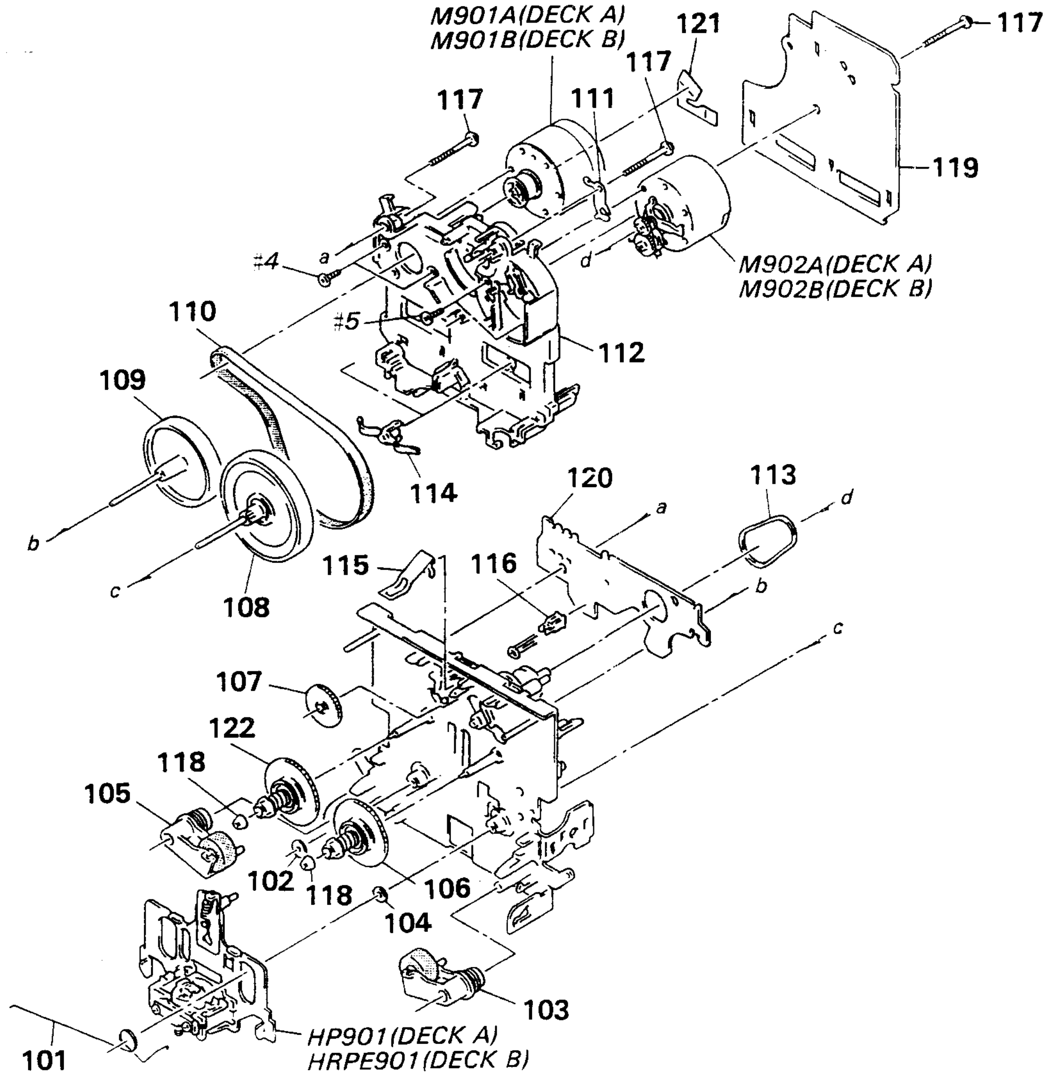


Remark

SION
SION
L)
R)
E)

6-3. MECHANISM SECTION 1

(TCM-190RA12C
TCM-190RB22C)

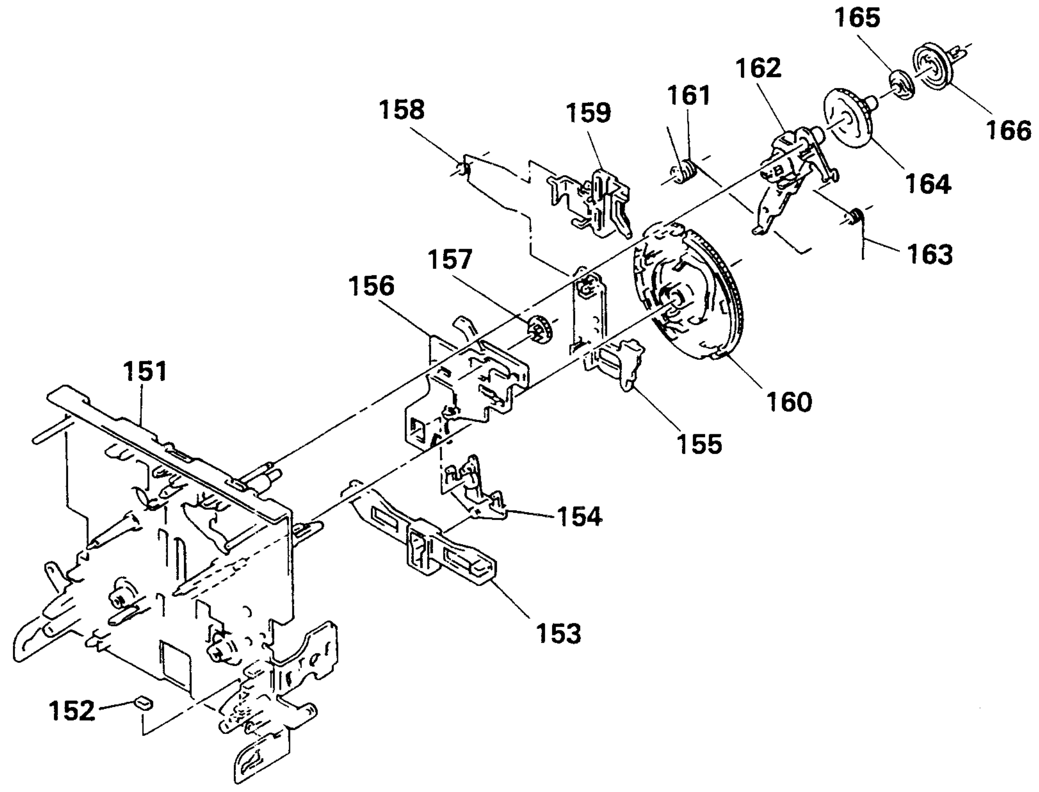

M901A(DECK A)
M901B(DECK B)
121
117
117
111
117
119
#4
a
d
M902A(DECK A)
M902B(DECK B)
110
#5
112
109
114
b
c
108
120
a
113
d
115
116
b
c
107
122
118
105
102
118
106
104
103
101
HP901(DECK A)
HRPE901(DECK B)

Ref. No.	Part No.	Description	Remark
101	3-359-455-01	SPRING. TORSION	
102	3-356-714-01	WASHER	
103	X-3359-408-1	LEVER (PINCH LEVER FWD) ASSY	
104	3-356-713-01	WASHER	
105	X-3359-409-1	LEVER (PINCH LEVER REV) ASSY	
106	X-3359-404-1	TABLE ASSY. REEL	
107	3-359-424-01	GEAR (REV GEAR)	
108	X-3359-406-1	FLYWHEEL (FWD) COMPLETE ASSY (DECK A)	
108	X-3364-554-1	FLYWHEEL (FWD) ASSY (DECK B)	
109	X-3359-410-1	FLYWHEEL (REV) ASSY	
110	3-359-417-01	BELT (FLAT). CAPSTAN	
111	3-359-450-01	PLATE. GROUND	
* 112	3-359-436-01	BASE (THRUST RETAINER). FITTING	
113	3-359-466-01	BELT (FR). SQUARE	
114	3-575-321-00	RETAINER. THRUST. CAPSTAN	
115	3-359-430-01	SPRING (CASSETTE RETAINER). LEAF	

Ref. No.	Part No.	Description	Remark
116	3-343-419-01	HOLDER (S SENSER A)	
117	3-359-414-01	SCREW (+PTPWH 2X23)	
118	3-362-308-01	CAP (REEL)	
* 119	A-2006-399-A	MD-A BORAD. COMPLETE (DECK A)	
* 119	A-2006-400-A	MD-B BOARD. COMPLETE (DECK B)	
* 120	1-634-841-14	SW-A BOARD (DECK A)	
* 120	1-634-841-14	SW-B BOARD (DECK B)	
121	1-638-983-11	MOTOR FLEXIBLE BOARD	
122	X-3362-078-1	TABLE ASSY (B). REEL	
HP901	A-2003-837-A	BASE ASSY. HEAD (PB) (DECK A)	
HRPE901	A-2003-838-A	BASE ASSY. HEAD (REC/PB/ERASE) (DECK B)	
M901A	X-3359-417-1	MOTOR ASSY (CAPSTAN) (DECK A)	
M901B	X-3359-417-1	MOTOR ASSY (CAPSTAN) (DECK B)	
M902A	X-3363-501-1	MOTOR ASSY (REEL) (DECK A)	
M902B	X-3363-501-1	MOTOR ASSY (REEL) (DECK B)	

6-4. MECHANISM SECTION 2

(TCM-190RA12C
TCM-190RB22C)


165
162
161
158
159
166
164
163
157
156
151
160
155
154
153
152

Ref. No.	Part No.	Description	Remark
151	X-3363-790-1	CHASSIS ASSY. MECHANICAL (DECK A)	
151	X-3359-415-1	CHASSIS ASSY. MECHANICAL (DECK B)	
152	3-359-469-01	SPACER	
* 153	3-359-425-01	SLIDER (REVERSE SLIDER)	
154	3-359-426-01	LEVER (REVERSE LEVER)	
* 155	3-359-427-01	SLIDER (LEVERSE SLIDER)	
* 156	3-359-415-01	SLIDER (TRIGGER SLIDER)	
157	3-359-448-01	GEAR (TRIGGER)	
158	3-359-454-01	SPRING. TORSION	

Ref. No.	Part No.	Description	Remark
159	3-359-429-01	SLIDER (BRAKE PLATE)	
160	3-359-420-01	GEAR (CAM GEAR)	
161	3-359-456-01	SPRING (TRIGGER SPRING). TORSION	
162	X-3359-405-1	LEVER (FR ARM) ASSY	
163	3-359-453-01	SPRING (FR ARM). TORSION	
164	3-359-419-01	GEAR (FR GEAR)	
165	3-359-421-01	CLUTCH (REEL DISK)	
166	3-359-418-01	PULLEY (FR PULLEY)	

SECTION 7
ELECTRICAL PARTS LIST

MAIN **PANEL**

CONTROL (A) **CONTROL (B)**

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- RESISTORS
  All resistors are in ohms
  METAL:Metal-film resistor
  METAL OXIDE:Metal Oxide-film resistor
  F:nonflammable
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ , for example:
  uA...: μA..., uPA...: μPA...,
  uPB...: μPB..., uPC...: μPC...,
  uPD...: μPD...
- CAPACITORS
  uF: μF
- COILS
  uH: μH

G : Germany
IT : Italian
EE : East European
EA : Saudi Arabia
AUS : Australian

When indication parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifé.

Ref. No.	Part No.	Description			Remark
*	A-2006-741-A	MAIN BOARD, COMPLETE (AEP,G,IT,EE,UK)			
		********************			
*	A-2006-742-A	MAIN BOARD, COMPLETE (E,EA,AUS)			
		********************			
*	1-643-521-11	PANEL BOARD			
		***********			
*	1-643-523-11	CONTROL (A) BOARD			
		*****************			
*	1-643-874-11	CONTROL (B) BOARD			
		*****************			
*	3-377-119-01	HOLDER, LED			
*	4-942-204-01	PLATE, GROUND			
	7-685-645-79	SCREW +BVTP 3X6 TYPE2 N-S			
		< CAPACITOR >			
C101	1-136-157-00	FILM	0.022uF	5%	50V
C102	1-126-059-11	ELECT	10uF	20%	50V(E,EA,AUS)
C103	1-126-059-11	ELECT	10uF	20%	50V
C104	1-126-301-11	ELECT	1uF	20%	50V
C105	1-162-294-31	CERAMIC	0.001uF	10%	50V
C106	1-130-475-00	MYLAR	0.0022uF	5%	50V
C107	1-130-475-00	MYLAR	0.0022uF	5%	50V
C108	1-136-174-00	FILM	0.56uF	5%	50V
C109	1-136-171-00	FILM	0.33uF	5%	50V
C110	1-126-059-11	ELECT	10uF	20%	50V
C112	1-126-162-11	ELECT	3.3uF	20%	50V
C113	1-126-300-11	ELECT	0.47uF	20%	50V
C114	1-126-059-11	ELECT	10uF	20%	50V
C201	1-136-157-00	FILM	0.022uF	5%	50V
C202	1-126-059-11	ELECT	10uF	20%	50V(E,EA,AUS)
C203	1-126-059-11	ELECT	10uF	20%	50V
C204	1-126-301-11	ELECT	1uF	20%	50V
C205	1-162-294-31	CERAMIC	0.001uF	10%	50V
C206	1-130-475-00	MYLAR	0.0022uF	5%	50V
C207	1-130-475-00	MYLAR	0.0022uF	5%	50V
C208	1-136-174-00	FILM	0.56uF	5%	50V
C209	1-136-171-00	FILM	0.33uF	5%	50V
C210	1-126-059-11	ELECT	10uF	20%	50V
C212	1-126-162-11	ELECT	3.3uF	20%	50V
C213	1-126-300-11	ELECT	0.47uF	20%	50V
C214	1-126-059-11	ELECT	10uF	20%	50V
C501	1-124-994-11	ELECT	100uF	20%	10V
C502	1-124-994-11	ELECT	100uF	20%	10V
C503	1-126-059-11	ELECT	10uF	20%	50V
C504	1-126-301-11	ELECT	1uF	20%	50V
C505	1-161-494-00	CERAMIC	0.022uF		25V
C506	1-126-161-11	ELECT	2.2uF	20%	50V
C701	1-124-887-00	ELECT	3300uF	20%	16V
C702	1-124-887-00	ELECT	3300uF	20%	16V
C703	1-126-101-11	ELECT	100uF	20%	16V
C704	1-124-473-11	ELECT	1000uF	20%	10V
C705	1-124-473-11	ELECT	1000uF	20%	10V
C706	1-126-161-11	ELECT	2.2uF	20%	50V
C707	1-124-472-11	ELECT	470uF	20%	10V
C708	1-126-301-11	ELECT	1uF	20%	50V
C711	1-126-161-11	ELECT	2.2uF	20%	50V
C801	1-126-059-11	ELECT	10uF	20%	50V
C802	1-162-288-31	CERAMIC	330PF	10%	50V
C803	1-136-165-00	FILM	0.1uF	5%	50V
C804	1-162-288-31	CERAMIC	330PF	10%	50V
C805	1-136-165-00	FILM	0.1uF	5%	50V
C806	1-126-059-11	ELECT	10uF	20%	50V
C807	1-126-059-11	ELECT	10uF	20%	50V
C808	1-161-494-00	CERAMIC	0.022uF		25V
C809	1-124-994-11	ELECT	100uF	20%	10V
C810	1-161-494-00	CERAMIC	0.022uF		25V
C811	1-161-494-00	CERAMIC	0.022uF		25V

MAIN PANEL CONTROL (A) CONTROL (B)

Ref. No.	Part No.	Description	Remark
		< CONNECTOR >	
* CN501	1-580-784-11	CONNECTOR, BOARD TO BOARD	
* CN502	1-580-784-11	CONNECTOR, BOARD TO BOARD	
* CN503	1-580-784-11	CONNECTOR, BOARD TO BOARD	
* CN504	1-566-858-41	SOCKET, CONNECTOR 11P (SYSTEM CONTROL 1)	
* CN701	1-566-859-11	SOCKET, CONNECTOR 15P (SYSTEM CONTROL 2)	
CN802	1-568-802-11	SOCKET, CONNECTOR 19P	
* CN803	1-691-670-11	CONNECTOR, BOARD TO BOARD 5P	
* CN804	1-691-670-11	CONNECTOR, BOARD TO BOARD 5P	
* CN805	1-568-828-11	SOCKET, CONNECTOR 9P	
* CN806	1-568-828-11	SOCKET, CONNECTOR 9P	
* CN901	1-568-862-11	SOCKET, CONNECTOR 19P	
* CN902	1-691-746-11	CONNECTOR, BOARD TO BOARD 5P	
* CN903	1-691-746-11	CONNECTOR, BOARD TO BOARD 5P	
		< DIODE >	
D501	8-719-987-63	DIODE 1N4148M	
D701	8-719-200-77	DIODE 10E2N	
D702	8-719-200-77	DIODE 10E2N	
D703	8-719-200-77	DIODE 10E2N	
D704	8-719-200-77	DIODE 10E2N	
D707	8-719-933-33	DIODE HZS6A1L	
D708	8-719-933-33	DIODE HZS6A1L	
D709	8-719-000-78	DIODE UZL-7L2	
D710	8-719-987-63	DIODE 1N4148M	
D711	8-719-987-63	DIODE 1N4148M	
D712	8-719-000-78	DIODE UZL-7L2	
D801	8-719-987-63	DIODE 1N4148M	
D802	8-719-987-63	DIODE 1N4148M (AEP, G, IT, EE, UK)	
D803	8-719-987-63	DIODE 1N4148M	
D804	8-719-987-63	DIODE 1N4148M	
D805	8-719-987-63	DIODE 1N4148M	
D901	8-719-301-38	LED SEL2210S-C (HIGH)	
D902	8-719-301-38	LED SEL2210S-C (NORMAL)	
D903	8-719-301-38	LED SEL2210S-C (CD SYNCH)	
D904	8-719-302-41	LED SEL2910A-C (A FWD)	
D905	8-719-302-41	LED SEL2910A-C (A REV)	
D906	8-719-301-44	LED SEL2410E-D (A STOP)	
D907	8-719-302-41	LED SEL2910A-C (B FWD)	
D908	8-719-302-41	LED SEL2910A-C (B REV)	
D909	8-719-301-44	LED SEL2410E-D (B STOP)	
D910	8-719-302-41	LED SEL2910A-C (PAUSE)	
D911	8-719-301-38	LED SEL2210S-C (REC)	
		< IC >	
IC501	8-759-140-53	IC uPD4053BC	
IC502	8-759-634-51	IC M5218AP (E, EA, AUS)	
IC503	8-752-059-55	IC CXA1331S	
IC504	8-752-055-61	IC CXA1578P	
IC505	8-759-634-51	IC M5218AP	
IC506	8-759-000-49	IC MC14066BCP (E, EA, AUS)	
IC701	8-759-945-58	IC RC4558P	
IC801	8-759-061-69	IC M50964-302SP	
IC802	8-759-207-05	IC TA7272P	
		< FILTER >	
LPF101	1-236-087-11	FILTER, LOW PASS	
LPF201	1-236-087-11	FILTER, LOW PASS	
		< TRANSISTOR >	
Q101	8-729-900-74	TRANSISTOR DTC143TS	
Q102	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q201	8-729-900-74	TRANSISTOR DTC143TS	
Q202	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q501	8-729-900-61	TRANSISTOR DTA114ES	
Q502	8-729-900-89	TRANSISTOR DTC144ES (E, EA, AUS)	
Q505	8-729-900-65	TRANSISTOR DTA144ES	
Q701	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q702	8-729-209-15	TRANSISTOR 2SD2012	
Q703	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q704	8-729-209-15	TRANSISTOR 2SD2012	
Q705	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q706	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q801	8-729-900-89	TRANSISTOR DTC144ES	
Q802	8-729-900-61	TRANSISTOR DTA114ES	
Q803	8-729-821-04	TRANSISTOR 2SA1317-STU	
Q804	8-729-900-61	TRANSISTOR DTA114ES	
Q805	8-729-821-04	TRANSISTOR 2SA1317-STU	
Q806	8-729-821-04	TRANSISTOR 2SA1317-STU	
Q807	8-729-821-04	TRANSISTOR 2SA1317-STU	
Q808	8-729-900-61	TRANSISTOR DTA114ES	
Q809	8-729-821-04	TRANSISTOR 2SA1317-STU	
Q810	8-729-900-61	TRANSISTOR DTA114ES	
Q811	8-729-821-04	TRANSISTOR 2SA1317-STU	
Q812	8-729-821-04	TRANSISTOR 2SA1317-STU	
Q813	8-729-900-61	TRANSISTOR DTA114ES	
Q814	8-729-900-89	TRANSISTOR DTC144ES	
Q815	8-729-801-84	TRANSISTOR 2SB1013-4	
Q816	8-729-801-84	TRANSISTOR 2SB1013-4	
Q817	8-729-900-61	TRANSISTOR DTA114ES	
Q818	8-729-900-65	TRANSISTOR DTA144ES (E, EA, AUS)	
Q819	8-729-900-61	TRANSISTOR DTA114ES	
Q820	8-729-900-89	TRANSISTOR DTC144ES	
		< RESISTOR >	
R101	1-249-421-11	CARBON 2.2K 5% 1/4W	

MAIN **PANEL** **CONTROL (A)** **CONTROL (B)**

Ref. No.	Part No.	Description	Remark
R102	1-249-423-11	CARBON 3.3K 5% 1/4W	
R103	1-247-887-00	CARBON 220K 5% 1/4W	
R104	1-249-421-11	CARBON 2.2K 5% 1/4W	(E. EA. AUS)
R105	1-249-437-11	CARBON 47K 5% 1/4W	(E. EA. AUS)
R106	1-249-417-11	CARBON 1K 5% 1/4W	
R108	1-247-842-11	CARBON 3K 5% 1/4W	
R109	1-249-423-11	CARBON 3.3K 5% 1/4W	
R110	1-249-428-11	CARBON 8.2K 5% 1/4W	
R111	1-249-434-11	CARBON 27K 5% 1/4W	
R112	1-247-864-11	CARBON 24K 5% 1/4W	
R113	1-249-414-11	CARBON 560 5% 1/4W	
R114	1-249-421-11	CARBON 2.2K 5% 1/4W	
R115	1-249-431-11	CARBON 15K 5% 1/4W	
R116	1-249-421-11	CARBON 2.2K 5% 1/4W	
R117	1-249-429-11	CARBON 10K 5% 1/4W	
R118	1-249-421-11	CARBON 2.2K 5% 1/4W	
R201	1-249-421-11	CARBON 2.2K 5% 1/4W	
R202	1-249-423-11	CARBON 3.3K 5% 1/4W	
R203	1-247-887-00	CARBON 220K 5% 1/4W	
R204	1-249-421-11	CARBON 2.2K 5% 1/4W	(E. EA. AUS)
R205	1-249-437-11	CARBON 47K 5% 1/4W	(E. EA. AUS)
R206	1-249-417-11	CARBON 1K 5% 1/4W	
R208	1-247-842-11	CARBON 3K 5% 1/4W	
R209	1-249-423-11	CARBON 3.3K 5% 1/4W	
R210	1-249-428-11	CARBON 8.2K 5% 1/4W	
R211	1-249-434-11	CARBON 27K 5% 1/4W	
R212	1-247-864-11	CARBON 24K 5% 1/4W	
R213	1-249-414-11	CARBON 560 5% 1/4W	
R214	1-249-421-11	CARBON 2.2K 5% 1/4W	
R215	1-249-431-11	CARBON 15K 5% 1/4W	
R216	1-249-421-11	CARBON 2.2K 5% 1/4W	
R217	1-249-429-11	CARBON 10K 5% 1/4W	
R218	1-249-421-11	CARBON 2.2K 5% 1/4W	
R501	1-249-405-11	CARBON 100 5% 1/4W	
R502	1-249-405-11	CARBON 100 5% 1/4W	
R503	1-249-434-11	CARBON 27K 5% 1/4W	
R504	1-249-429-11	CARBON 10K 5% 1/4W	
R505	1-249-413-11	CARBON 470 5% 1/4W	
R506	1-247-864-11	CARBON 24K 5% 1/4W	
R510	1-249-429-11	CARBON 10K 5% 1/4W	
R511	1-249-429-11	CARBON 10K 5% 1/4W	
R512	1-249-441-11	CARBON 100K 5% 1/4W	
R513	1-249-417-11	CARBON 1K 5% 1/4W	
R514	1-249-441-11	CARBON 100K 5% 1/4W	
R515	1-249-427-11	CARBON 6.8K 5% 1/4W	
R516	1-249-413-11	CARBON 470 5% 1/4W	
R517	1-249-429-11	CARBON 10K 5% 1/4W	
R518	1-249-413-11	CARBON 470 5% 1/4W	
R519	1-249-431-11	CARBON 15K 5% 1/4W	

Ref. No.	Part No.	Description	Remark
R520	1-247-870-11	CARBON 43K 5% 1/4W	
R521	1-249-433-11	CARBON 22K 5% 1/4W	(E. EA. AUS)
R522	1-249-433-11	CARBON 22K 5% 1/4W	(E. EA. AUS)
R524	1-249-417-11	CARBON 1K 5% 1/4W	
R525	1-249-429-11	CARBON 10K 5% 1/4W	
R526	1-249-429-11	CARBON 10K 5% 1/4W	
R527	1-247-858-11	CARBON 13K 5% 1/4W	
R528	1-247-862-11	CARBON 20K 5% 1/4W	
R529	1-249-417-11	CARBON 1K 5% 1/4W	
R530	1-249-429-11	CARBON 10K 5% 1/4W	
R532	1-247-844-11	CARBON 3.6K 5% 1/4W	
R701	1-249-413-11	CARBON 470 5% 1/4W	
R702	1-249-413-11	CARBON 470 5% 1/4W	
R703	1-249-422-11	CARBON 2.7K 5% 1/4W	
R704	1-247-858-11	CARBON 13K 5% 1/4W	
R705	1-249-429-11	CARBON 10K 5% 1/4W	
R706	1-249-417-11	CARBON 1K 5% 1/4W	
R707	1-247-850-11	CARBON 6.2K 5% 1/4W	
R708	1-249-422-11	CARBON 2.7K 5% 1/4W	
R709	1-249-429-11	CARBON 10K 5% 1/4W	
R710	1-249-429-11	CARBON 10K 5% 1/4W	
R711	1-249-421-11	CARBON 2.2K 5% 1/4W	
R712	1-249-432-11	CARBON 18K 5% 1/4W	
R713	1-249-423-11	CARBON 3.3K 5% 1/4W	
R714	1-249-433-11	CARBON 22K 5% 1/4W	
R715	1-249-435-11	CARBON 33K 5% 1/4W	
R716	1-249-405-11	CARBON 100 5% 1/4W	
R717	1-249-422-11	CARBON 2.7K 5% 1/4W	
R801	1-247-903-00	CARBON 1M 5% 1/4W	
R802	1-249-429-11	CARBON 10K 5% 1/4W	
R803	1-249-425-11	CARBON 4.7K 5% 1/4W	
R804	1-249-405-11	CARBON 100 5% 1/4W	
R805	1-249-393-11	CARBON 10 5% 1/4W	
R806	1-249-433-11	CARBON 22K 5% 1/4W	
R807	1-249-433-11	CARBON 22K 5% 1/4W	
R808	1-249-417-11	CARBON 1K 5% 1/4W	
R809	1-249-433-11	CARBON 22K 5% 1/4W	
R810	1-247-850-11	CARBON 6.2K 5% 1/4W	
R811	1-249-433-11	CARBON 22K 5% 1/4W	
R812	1-249-430-11	CARBON 12K 5% 1/4W	
R813	1-249-429-11	CARBON 10K 5% 1/4W	
R814	1-249-429-11	CARBON 10K 5% 1/4W	
R815	1-249-434-11	CARBON 27K 5% 1/4W	
R816	1-249-429-11	CARBON 10K 5% 1/4W	
R818	1-249-434-11	CARBON 27K 5% 1/4W	
R819	1-249-429-11	CARBON 10K 5% 1/4W	
R820	1-249-421-11	CARBON 2.2K 5% 1/4W	
R821	1-249-421-11	CARBON 2.2K 5% 1/4W	
R822	1-249-422-11	CARBON 2.7K 5% 1/4W	

Ref. No.	Part No.	Description				Remark
R823	1-249-422-11	CARBON	2.7K	5%	1/4W	
R824	1-249-422-11	CARBON	2.7K	5%	1/4W	
R825	1-249-425-11	CARBON	4.7K	5%	1/4W	
R826	1-249-433-11	CARBON	22K	5%	1/4W	
R827	1-249-429-11	CARBON	10K	5%	1/4W	
R828	1-249-413-11	CARBON	470	5%	1/4W	
R829	1-249-411-11	CARBON	330	5%	1/4W	
R830	1-249-410-11	CARBON	270	5%	1/4W	
R831	1-249-410-11	CARBON	270	5%	1/4W	
R832	1-249-408-11	CARBON	180	5%	1/4W	
R833	1-249-410-11	CARBON	270	5%	1/4W	
R834	1-249-410-11	CARBON	270	5%	1/4W	
R835	1-249-408-11	CARBON	180	5%	1/4W	
R836	1-249-410-11	CARBON	270	5%	1/4W	
R837	1-249-411-11	CARBON	330	5%	1/4W	
R838	1-247-895-00	CARBON	470K	5%	1/4W	
R839	1-247-895-00	CARBON	470K	5%	1/4W	
R840	1-247-860-11	CARBON	16K	5%	1/4W	
R841	1-249-431-11	CARBON	15K	5%	1/4W	
R842	1-249-425-11	CARBON	4.7K	5%	1/4W	
R843	1-247-862-11	CARBON	20K	5%	1/4W	
R844	1-247-862-11	CARBON	20K	5%	1/4W	
R845	1-249-425-11	CARBON	4.7K	5%	1/4W	
R846	1-249-415-11	CARBON	680	5%	1/4W	
R847	1-249-429-11	CARBON	10K	5%	1/4W	
R848	1-249-415-11	CARBON	680	5%	1/4W	
R849	1-249-429-11	CARBON	10K	5%	1/4W	
R850	1-249-429-11	CARBON	10K	5%	1/4W	
R851	1-249-437-11	CARBON	47K	5%	1/4W	
R852	1-247-866-11	CARBON	30K	5%	1/4W	
R853	1-247-866-11	CARBON	30K	5%	1/4W	
R854	1-249-437-11	CARBON	47K	5%	1/4W	
R855	1-247-872-11	CARBON	51K	5%	1/4W	
R856	1-247-872-11	CARBON	51K	5%	1/4W	
R857	1-247-872-11	CARBON	51K	5%	1/4W	
R858	1-247-872-11	CARBON	51K	5%	1/4W	
R859	1-249-405-11	CARBON	100	5%	1/4W	
R860	1-249-405-11	CARBON	100	5%	1/4W	
R899	1-249-393-11	CARBON	10	5%	1/4W	
R901	1-249-407-11	CARBON	150	5%	1/4W	
R902	1-249-409-11	CARBON	220	5%	1/4W	
R903	1-249-411-11	CARBON	330	5%	1/4W	
R904	1-249-413-11	CARBON	470	5%	1/4W	
R905	1-249-415-11	CARBON	680	5%	1/4W	
R906	1-249-417-11	CARBON	1K	5%	1/4W	
R907	1-249-420-11	CARBON	1.8K	5%	1/4W	
R908	1-249-424-11	CARBON	3.9K	5%	1/4W	
R909	1-249-407-11	CARBON	150	5%	1/4W	
R910	1-249-409-11	CARBON	220	5%	1/4W	
R911	1-249-411-11	CARBON	330	5%	1/4W	
R912	1-249-413-11	CARBON	470	5%	1/4W	
R913	1-249-415-11	CARBON	680	5%	1/4W	
R914	1-249-417-11	CARBON	1K	5%	1/4W	
R915	1-249-426-11	CARBON	5.6K	5%	1/4W	
R916	1-249-430-11	CARBON	12K	5%	1/4W	
R917	1-249-421-11	CARBON	2.2K	5%	1/4W	

< VARIABLE RESISTOR >

RV101	1-241-630-11	RES, ADJ, CARBON 10K
RV201	1-241-630-11	RES, ADJ, CARBON 10K

< SWITCH >

S901	1-572-378-11	SWITCH, SLIDE (DIRECTION)
S902	1-572-378-11	SWITCH, SLIDE (DOLBY NR)
S903	1-554-303-21	SWITCH, TACTILE (A STOP)
S904	1-554-303-21	SWITCH, TACTILE (A FWD)
S905	1-554-303-21	SWITCH, TACTILE (A REV)
S906	1-554-303-21	SWITCH, TACTILE (B REW)
S907	1-554-303-21	SWITCH, TACTILE (B FF)
S908	1-554-303-21	SWITCH, TACTILE (B REC)
S909	1-554-303-21	SWITCH, TACTILE (DUB HIGH SPEED)
S910	1-554-303-21	SWITCH, TACTILE (DUB NORMAL SPEED)
S911	1-554-303-21	SWITCH, TACTILE (CD SYNCHRO)
S912	1-554-303-21	SWITCH, TACTILE (B STOP)
S913	1-554-303-21	SWITCH, TACTILE (B PAUSE)
S914	1-554-303-21	SWITCH, TACTILE (B FWD)
S915	1-554-303-21	SWITCH, TACTILE (B RVS)
S916	1-554-303-21	SWITCH, TACTILE (B REC MUTE)
S917	1-554-303-21	SWITCH, TACTILE (A REW)
S918	1-554-303-21	SWITCH, TACTILE (A FF)

< VIBRATOR >

X801	1-577-358-21	VIBRATOR, CERAMIC (4MHz)

****

* A-2006-399-A MD-A BOARD, COMPLETE

****

< CAPACITOR >

C11	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C12	1-136-157-00	FILM	0.022uF	5%	50V
C13	1-124-234-00	ELECT	22uF	20%	16V
C18	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C21	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C22	1-136-157-00	FILM	0.022uF	5%	50V
C23	1-124-234-00	ELECT	22uF	20%	16V
C28	1-163-117-00	CERAMIC CHIP	100PF	5%	50V

MD-A **MD-B**

Ref. No.	Part No.	Description			Remark
C31	1-124-234-00	ELECT	22uF	20%	16V
C32	1-124-234-00	ELECT	22uF	20%	16V
C72	1-124-499-11	ELECT, NONPOLAR	1uF	20%	50V
		< CONNECTOR >			
* CNJ31	1-580-782-11	CONNECTOR, BOARD TO BOARD			
* CNJ72	1-580-411-11	SOCKET, CONNECTOR 4P			
* CNP32	1-580-772-11	PIN, CONNECTOR (PC BOARD) 4P			
* CNP71	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P			
		< IC >			
IC31	8-759-106-02	IC uPC4570G2			
		< CHIP JUMPER >			
JW1	1-216-295-00	METAL CHIP	0	5%	1/10W
JW51	1-216-296-00	METAL CHIP	0	5%	1/8W
JW52	1-216-296-00	METAL CHIP	0	5%	1/8W
JW53	1-216-296-00	METAL CHIP	0	5%	1/8W
JW54	1-216-296-00	METAL CHIP	0	5%	1/8W
		< TRANSISTOR >			
Q71	8-729-602-36	TRANSISTOR 2SA1602			
		< RESISTOR >			
R11	1-216-099-00	METAL CHIP	120K	5%	1/10W
R12	1-216-025-00	METAL CHIP	100	5%	1/10W
R13	1-216-100-00	METAL GLAZE	130K	5%	1/10W
R14	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R21	1-216-099-00	METAL CHIP	120K	5%	1/10W
R22	1-216-025-00	METAL CHIP	100	5%	1/10W
R23	1-216-100-00	METAL GLAZE	130K	5%	1/10W
R24	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R31	1-216-033-00	METAL CHIP	220	5%	1/10W
R32	1-216-033-00	METAL CHIP	220	5%	1/10W
R71	1-216-082-00	METAL GLAZE	24K	5%	1/10W
R72	1-216-081-00	METAL CHIP	22K	5%	1/10W
R73	1-216-089-00	METAL CHIP	47K	5%	1/10W
R74	1-216-089-00	METAL CHIP	47K	5%	1/10W
		< VARIABLE RESISTOR >			
RV11	1-238-012-11	RES, ADJ, CARBON 1K			
RV21	1-238-012-11	RES, ADJ, CARBON 1K			
RV71	1-238-016-11	RES, ADJ, CARBON 10K			
RV72	1-238-016-11	RES, ADJ, CARBON 10K			

****

Ref. No.	Part No.	Description			Remark
*	A-2006-400-A	MD-B BOARD, COMPLETE *******************			
		< CAPACITOR >			
C11	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C12	1-136-157-00	FILM	0.022uF	5%	50V
C13	1-124-234-00	ELECT	22uF	20%	16V
C14	1-136-273-91	FILM	75PF	5%	630V
C15	1-164-080-11	CERAMIC	390PF	10%	50V
C17	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C18	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C21	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C22	1-136-157-00	FILM	0.022uF	5%	50V
C23	1-124-234-00	ELECT	22uF	20%	16V
C24	1-136-273-91	FILM	75PF	5%	630V
C25	1-164-080-11	CERAMIC	390PF	10%	50V
C27	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C28	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C31	1-124-234-00	ELECT	22uF	20%	16V
C32	1-124-234-00	ELECT	22uF	20%	16V
C33	1-124-234-00	ELECT	22uF	20%	16V
C51	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C52	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C53	1-163-022-00	CERAMIC CHIP	0.012uF	10%	50V
C54	1-136-559-11	FILM	0.0047uF	5%	630V
C56	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C57	1-164-346-11	CERAMIC CHIP	1uF		16V
C58	1-163-024-00	CERAMIC CHIP	0.018uF	10%	50V
C72	1-124-499-11	ELECT, NONPOLAR	1uF	20%	50V
		< CONNECTOR >			
* CNJ31	1-580-782-11	CONNECTOR, BOARD TO BOARD			
* CNJ33	1-580-782-11	CONNECTOR, BOARD TO BOARD			
* CNJ72	1-580-411-11	SOCKET, CONNECTOR 4P			
* CNP32	1-580-781-11	PIN, CONNECTOR (PC BOARD) 7P			
* CNP71	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P			
		< DIODE >			
D31	8-719-988-62	DIODE 1SS355			
		< IC >			
IC31	8-759-106-02	IC uPC4570G2			
		< CHIP JUMPER >			
JW1	1-216-296-00	METAL CHIP	0	5%	1/8W
JW2	1-216-295-00	METAL CHIP	0	5%	1/10W
JW3	1-216-295-00	METAL CHIP	0	5%	1/10W
JW4	1-216-295-00	METAL CHIP	0	5%	1/10W
JW5	1-216-295-00	METAL CHIP	0	5%	1/10W

MD-B SW-A SW-B

Ref. No.	Part No.	Description			Remark
JW6	1-216-295-00	METAL CHIP	0	5%	1/10W
JW7	1-216-295-00	METAL CHIP	0	5%	1/10W
JW52	1-216-296-00	METAL CHIP	0	5%	1/8W
JW53	1-216-296-00	METAL CHIP	0	5%	1/8W
JW54	1-216-296-00	METAL CHIP	0	5%	1/8W
JW55	1-216-296-00	METAL CHIP	0	5%	1/8W
JW56	1-216-296-00	METAL CHIP	0	5%	1/8W
JW57	1-216-296-00	METAL CHIP	0	5%	1/8W
JW58	1-216-296-00	METAL CHIP	0	5%	1/8W
JW59	1-216-296-00	METAL CHIP	0	5%	1/8W
JW60	1-216-296-00	METAL CHIP	0	5%	1/8W
JW61	1-216-296-00	METAL CHIP	0	5%	1/8W
		< COIL >			
L11	1-410-780-11	INDUCTOR	27mH		
L21	1-410-780-11	INDUCTOR	27mH		
		< TRANSISTOR >			
Q51	8-729-808-01	TRANSISTOR	2SD1622-S		
Q52	8-729-808-01	TRANSISTOR	2SD1622-S		
Q53	8-729-808-01	TRANSISTOR	2SD1622-S		
Q71	8-729-602-36	TRANSISTOR	2SA1602		
		< RESISTOR >			
R11	1-216-099-00	METAL CHIP	120K	5%	1/10W
R12	1-216-025-00	METAL CHIP	100	5%	1/10W
R13	1-216-100-00	METAL GLAZE	130K	5%	1/10W
R14	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R15	1-249-430-11	CARBON	12K	5%	1/4W
R21	1-216-099-00	METAL CHIP	120K	5%	1/10W
R22	1-216-025-00	METAL CHIP	100	5%	1/10W
R23	1-216-100-00	METAL GLAZE	130K	5%	1/10W
R24	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R25	1-249-430-11	CARBON	12K	5%	1/4W
R31	1-216-033-00	METAL CHIP	220	5%	1/10W
R32	1-216-033-00	METAL CHIP	220	5%	1/10W
R41	1-249-393-11	CARBON	10	5%	1/4W
R42	1-249-393-11	CARBON	10	5%	1/4W
R51	1-216-075-00	METAL CHIP	12K	5%	1/10W
R52	1-216-075-00	METAL CHIP	12K	5%	1/10W
R53	1-216-073-00	METAL CHIP	10K	5%	1/10W
R54	1-216-309-00	METAL CHIP	5.6	5%	1/10W
R55	1-216-309-00	METAL CHIP	5.6	5%	1/10W
R56	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R71	1-216-082-00	METAL GLAZE	24K	5%	1/10W
R72	1-216-081-00	METAL CHIP	22K	5%	1/10W
R73	1-216-089-00	METAL CHIP	47K	5%	1/10W
R74	1-216-089-00	METAL CHIP	47K	5%	1/10W

Ref. No.	Part No.	Description			Remark
		< VARIABLE RESISTOR >			
RV11	1-238-012-11	RES. ADJ. CARBON 1K			
RV12	1-238-551-11	RES. ADJ. CARBON 220K			
RV21	1-238-012-11	RES. ADJ. CARBON 1K			
RV22	1-238-551-11	RES. ADJ. CARBON 220K			
RV71	1-238-016-11	RES. ADJ. CARBON 10K			
RV72	1-238-016-11	RES. ADJ. CARBON 10K			
		< RELAY >			
RY31	1-515-726-11	RELAY			
		< COIL >			
T51	1-406-419-11	COIL, BIAS OSCILLATION			

****

Ref. No.	Part No.	Description			Remark
*	1-634-841-14	SW-A BOARD **********			
	3-343-419-01	HOLDER (S SENSER A)			
		< CONNECTOR >			
* CNP81	1-568-852-11	SOCKET, CONNECTOR 9P			
		< IC >			
IC81	8-719-710-03	DIODE	NJL5165K-B		
		< RESISTOR >			
R84	1-249-417-11	CARBON	1K	5%	1/4W
R85	1-249-408-11	CARBON	180	5%	1/4W
		< SWITCH >			
S81	1-571-958-11	SWITCH, PUSH (1 KEY) (STOP)			
S82	1-571-281-21	SWITCH, LEAF (70EQ)			
S86	1-571-281-21	SWITCH, LEAF (HALF)			

****

Ref. No.	Part No.	Description			Remark
*	1-634-841-14	SW-B BOARD **********			
	3-343-419-01	HOLDER (S SENSER A)			
		< CONNECTOR >			
* CNP81	1-568-852-11	SOCKET, CONNECTOR 9P			
		< IC >			
IC81	8-719-710-03	DIODE	NJL5165K-B		

Ref. No.	Part No.	Description	Remark
		< RESISTOR >	
R81	1-249-414-11	CARBON 560 5% 1/4W	
R82	1-247-818-11	CARBON 300 5% 1/4W	
R83	1-247-834-11	CARBON 1.3K 5% 1/4W	
R84	1-249-417-11	CARBON 1K 5% 1/4W	
R85	1-249-408-11	CARBON 180 5% 1/4W	
		< SWITCH >	
S81	1-571-958-11	SWITCH, PUSH (1 KEY) (STOP)	
S82	1-571-281-21	SWITCH, LEAF (70EQ)	
S83	1-571-281-21	SWITCH, LEAF (METAL)	
S84	1-571-281-21	SWITCH, LEAF (REC A)	
S85	1-571-281-21	SWITCH, LEAF (REC B)	
S86	1-571-281-21	SWITCH, LEAF (HALF)	

****

MISCELLANEOUS
****

Ref. No.	Part No.	Description	Remark
57	1-590-237-11	WIRE, FLAT TYPE (19 CORE)	
71	1-690-906-11	WIRE (FLAT TYPE) (9 CORE)	
121	1-638-983-11	MOTOR FLEXIBLE BOARD	
HP901	A-2003-837-A	BASE ASSY, HEAD (PB) (DECK A)	
HRPE901	A-2003-838-A	BASE ASSY, HEAD (REC/PB/ERASE) (DECK B)	
M901A	X-3359-417-1	MOTOR ASSY (CAPSTAN) (DECK A)	
M901B	X-3359-417-1	MOTOR ASSY (CAPSTAN) (DECK B)	
M902A	X-3363-501-1	MOTOR ASSY (REEL) (DECK A)	
M902B	X-3363-501-1	MOTOR ASSY (REEL) (DECK B)	

****

ACCESSORIES & PACKING MATERIALS
****

Ref. No.	Part No.	Description	Remark
*	3-350-154-01	CUSHION	
	4-920-940-01	SHEET (A), PROTECTION	

****

HARDWARE LIST

Ref. No.	Part No.	Description
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S
#2	7-685-645-79	SCREW +BVTP 3X6 TYPE2 N-S
#3	7-621-773-93	SCREW (PANEL 2.6 TP2)
#4	7-621-775-00	SCREW +B 2.6X3
#5	7-627-556-08	SCREW +P 2.6X2.8

9-956-996-11

Sony Corporation
Audio Group

English
92B1873-1
Printed in Japan
©1992.2
Published by Customer Relations and Service Group

ST-D707

SERVICE MANUAL

AEP Model
UK Model
East European Model

• This set is the TUNER section in LBT-D507/D607/D707.

SPECIFICATIONS

System	FM stereo FM/AM superheterodyne tuner
FM tuner section	
Tuning range	87.5 to 108 MHz
Antenna	75 ohms unbalanced
Intermediate frequency	10.7 MHz
AM tuner section	
Tuning range	MW: 531 to 1,602 kHz LW: 153 to 279 kHz
Antenna	AM loop antenna External antenna terminal
Intermediate frequency	450 kHz

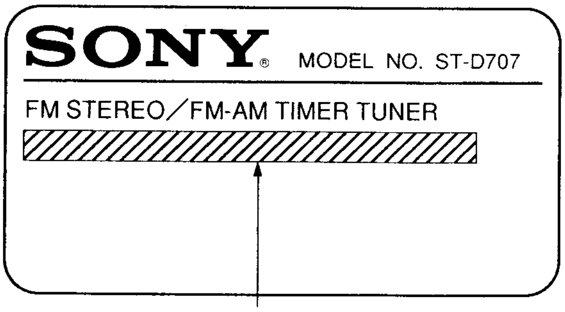
Power requirements	240 V AC, 50/60 Hz
Power consumption	10 W
AC outlet	2 switched, total 450 W max.
Weight	Approx. 2.7 kg (6 lbs 5 oz)
Dimensions	Approx. 355 x 95 x 310 mm (14 x $3^{3}/_{4}$ x $12^{1}/_{4}$ inches) (w/h/d, including projections)

Design and specifications are subject to change without notice.

Note
This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

MODEL IDENTIFICATION

— Model Number Portion —



AEP, East European model : AC : 220–230V ~ 50/60Hz
UK model : AC : 240V ~ 50/60Hz

MICROFILM

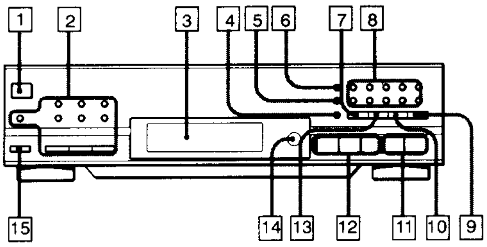
FM STEREO/FM-AM TIMER TUNER

SONY®

SECTION 1
GENERAL

This section is extracted from instruction manual.

Location of Controls



- 1 SYSTEM POWER switch (8)
- 2 Buttons for setting the clock and timer (40, 42)
- 3 Display window
- 4 MEMORY button (14)
- 5 MEMORY SCAN button (16)
- 6 AUTO TUNING button (12)
- 7 DISPLAY button (16, 40)
- 8 Numeric buttons (14)
- 9 BAND selector (12)
- 10 ST/MUTE button (12)
- 11 TUNING +/- buttons (12)
- 12 SHIFT buttons (A, B, C) (14)
- 13 CHARACTER button (15)
- 14 Remote sensor
- 15 SLEEP button (41)

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

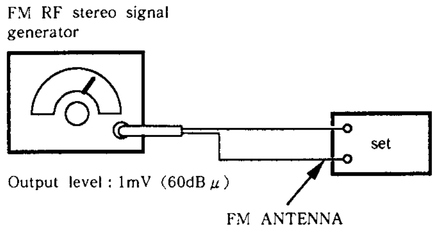
SECTION 2
ELECTRICAL ADJUSTMENTS

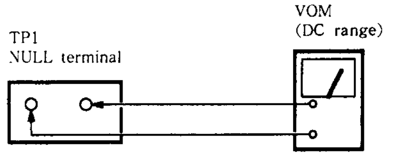
FM SECTION

SSG	Carrier frequency	98MHz
	Modulation	MONO : 1kHz, 40kHz deviation
		STEREO : Audio 1kHz, 16.25kHz deviation Pilot 19kHz, 7.5kHz deviation Sub-carrier 38kHz, 16.25kHz deviation

• FM Discriminator Alignment (NULL check)

Setting :


FM RF stereo signal generator
set
Output level : 1mV (60dB μ)
FM ANTENNA


TP1
NULL terminal
VOM
(DC range)

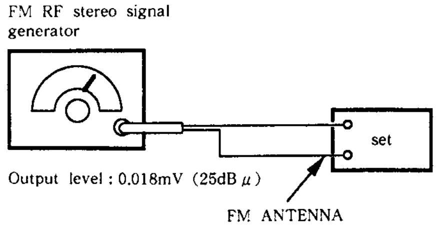
Procedure :

1. Tune the set to 98MHz.
2. Adjust T21 for 0V reading on the VOM.

Note : FM tuning level adjustment should be made after FM discriminator alignment.

• FM Tuning Level Adjustment

Setting :

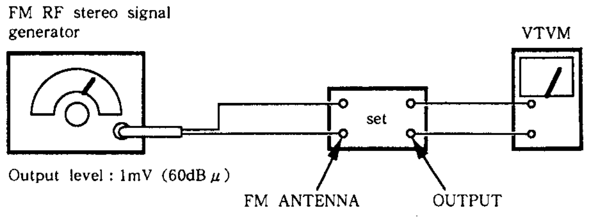

FM RF stereo signal generator
set
Output level : 0.018mV (25dB μ)
FM ANTENNA

Procedure :

1. Tune the set to 98MHz.
2. Adjust RV24 so that the TUNED LED goes on.

• FM Stereo Separation Adjustment

Setting :


FM RF stereo signal generator
VTVM
set
Output level : 1mV (60dB μ)
FM ANTENNA
OUTPUT

Procedure :

Tune the set to 98MHz

FM stereo Signal generator Output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV21 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV21 for minimum reading.

L-CH Stereo separation : Ⓐ − Ⓑ
R-CH Stereo separation : Ⓒ − Ⓓ

The separations of both channels should be equal.

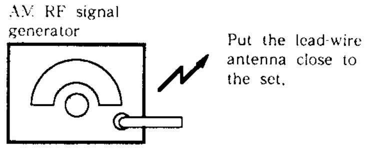
AM SECTION

• AM Tuning Level Adjustment

Setting :

BAND selector : LW

Procedure :


AM RF signal generator
Put the lead-wire antenna close to the set.

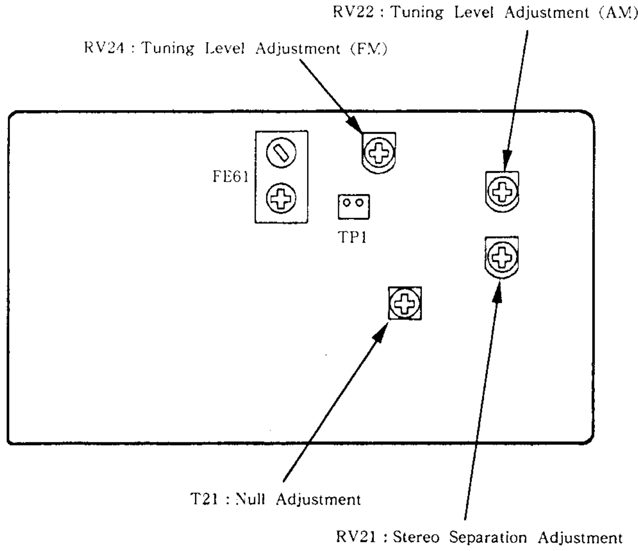
Carrier frequency : 216kHz

30% amplitude modulation by 400Hz signal
Output level : 68dB μ

1. Tune the set to 216kHz
2. Adjust the RV22 so that the TUNED LED goes on.

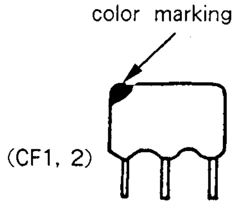
Parts Arrangement Diagram for Adjustments

— tuner board —


RV22 : Tuning Level Adjustment (AM)
RV24 : Tuning Level Adjustment (FM)
FE61
TP1
T21 : Null Adjustment
RV21 : Stereo Separation Adjustment

Note on Ceramic Filter (CF1, 2) Replacement.

This set employs three ceramic filters (CF1, 2) which should have the same color marking to identify their center frequency. Therefore FM IF offset adjustment by D708, D709 mounted is necessary to match the center frequency of the ceramic filters used with FM intermediate frequency.


color marking
(CF1, 2)

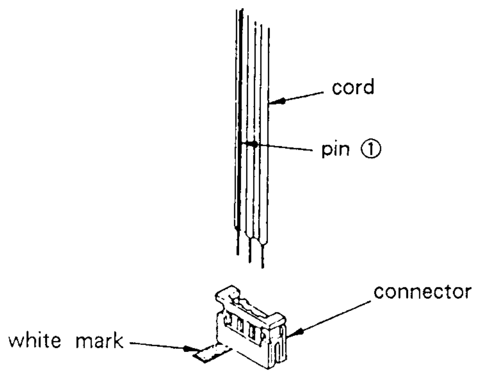
○ : Mounted
× : not Mounted

Ceramic filter		Mount		FM intermediate frequency (MHz)
Color mark	Center frequency (MHz)	*A D708	*B D709	
White	10.750	×	○	10.750
Red	10.700	○	○	10.700
Black	10.650	○	×	10.650

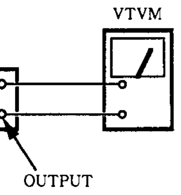
FM intermediate frequency is determined by the three types as shown above. Ceramic filters of same center frequency, i. e., of same color coding should be used for CF1 and CF2. When replacing the ceramic filters, perform the FM Discriminator Adjustment.

[Note on Inserting the Cord to the Connector on Tuner Board]

- Insert the cord to the connector fitting Pin ① of the cord in accordance with the white mark on the board at the connector as shown in the figure.


cord
pin ①
connector
white mark

3-1.


VTVM
OUTPUT

VTVM reading (dB)
Ⓐ
Ⓑ Adjust RV21 for minimum reading.
Ⓒ
Ⓓ Adjust RV21 for minimum reading.

be equal.

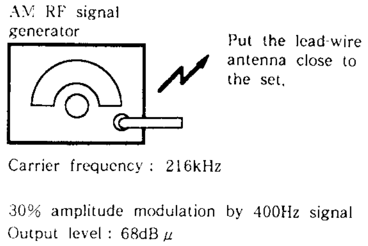
AM SECTION

- **AM Tuning Level Adjustment**

Setting :

BAND selector : LW

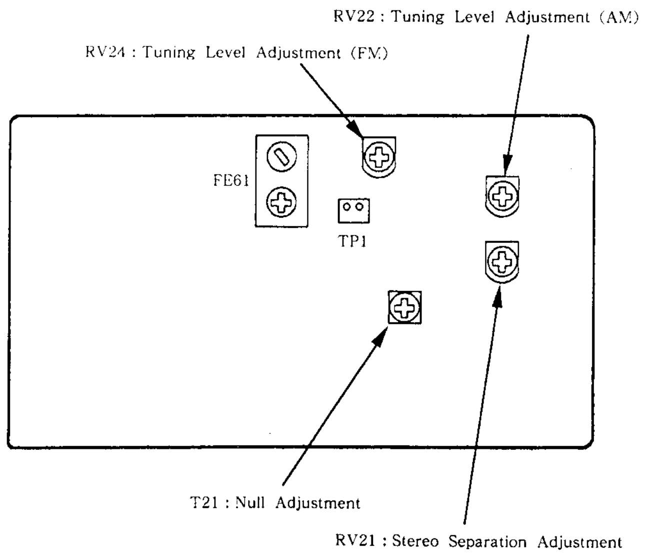
Procedure :


AM RF signal generator
Put the lead-wire antenna close to the set.
Carrier frequency : 216kHz
30% amplitude modulation by 400Hz signal
Output level : 68dB μ

1. Tune the set to 216kHz
2. Adjust the RV22 so that the TUNED LED goes on.

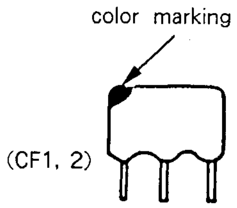
Parts Arrangement Diagram for Adjustments

– **tuner board** –


RV22 : Tuning Level Adjustment (AM)
RV24 : Tuning Level Adjustment (FM)
FE61
TP1
T21 : Null Adjustment
RV21 : Stereo Separation Adjustment

Note on Ceramic Filter (CF1, 2) Replacement.

This set employs three ceramic filters (CF1, 2) which should have the same color marking to identify their center frequency. Therefore FM IF offset adjustment by D708, D709 mounted is necessary to match the center frequency of the ceramic filters used with FM intermediate frequency.


color marking
(CF1, 2)

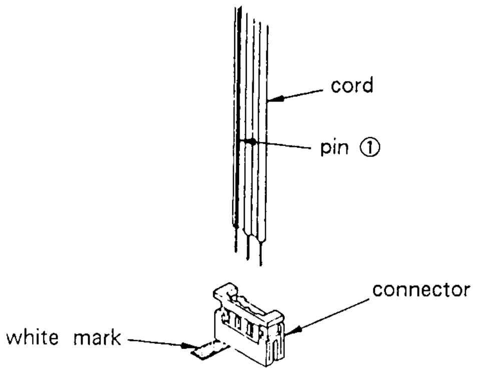
○ : Mounted
× : not Mounted

Ceramic filter		Mount		FM intermediate frequency (MHz)
Color mark	Center frequency (MHz)	*A D708	*B D709	
White Red Black	10.750 10.700 10.650	× ○ ○	○ ○ ×	10.750 10.700 10.650

FM intermediate frequency is determined by the three types as shown above. Ceramic filters of same center frequency, i. e., of same color coding should be used for CF1 and CF2. When replacing the ceramic filters, perform the FM Discriminator Adjustment.

[Note on Inserting the Cord to the Connector on Tuner Board]

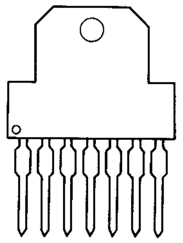
- Insert the cord to the connector fitting Pin ① of the cord in accordance with the white mark on the board at the connector as shown in the figure.


cord
pin ①
connector
white mark

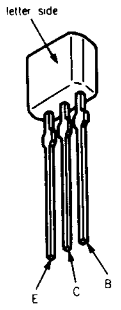
SECTION 3
DIAGRAMS

3-1. SEMICONDUCTOR LEAD LAYOUTS

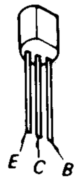
LA5667



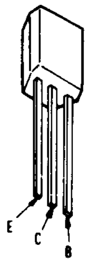
2SA1175-HFE
2SC2785-HFE


letter side
E
C
B

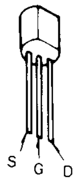
2SB1116A-L



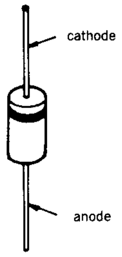
2SC2603-EF
2SC2669-OY
2SC3113-AB
DTA114ES
DTC114ES
DTC124ES



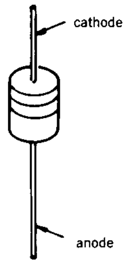
2SK246-GR3



1N4148M
10E2N


cathode
anode

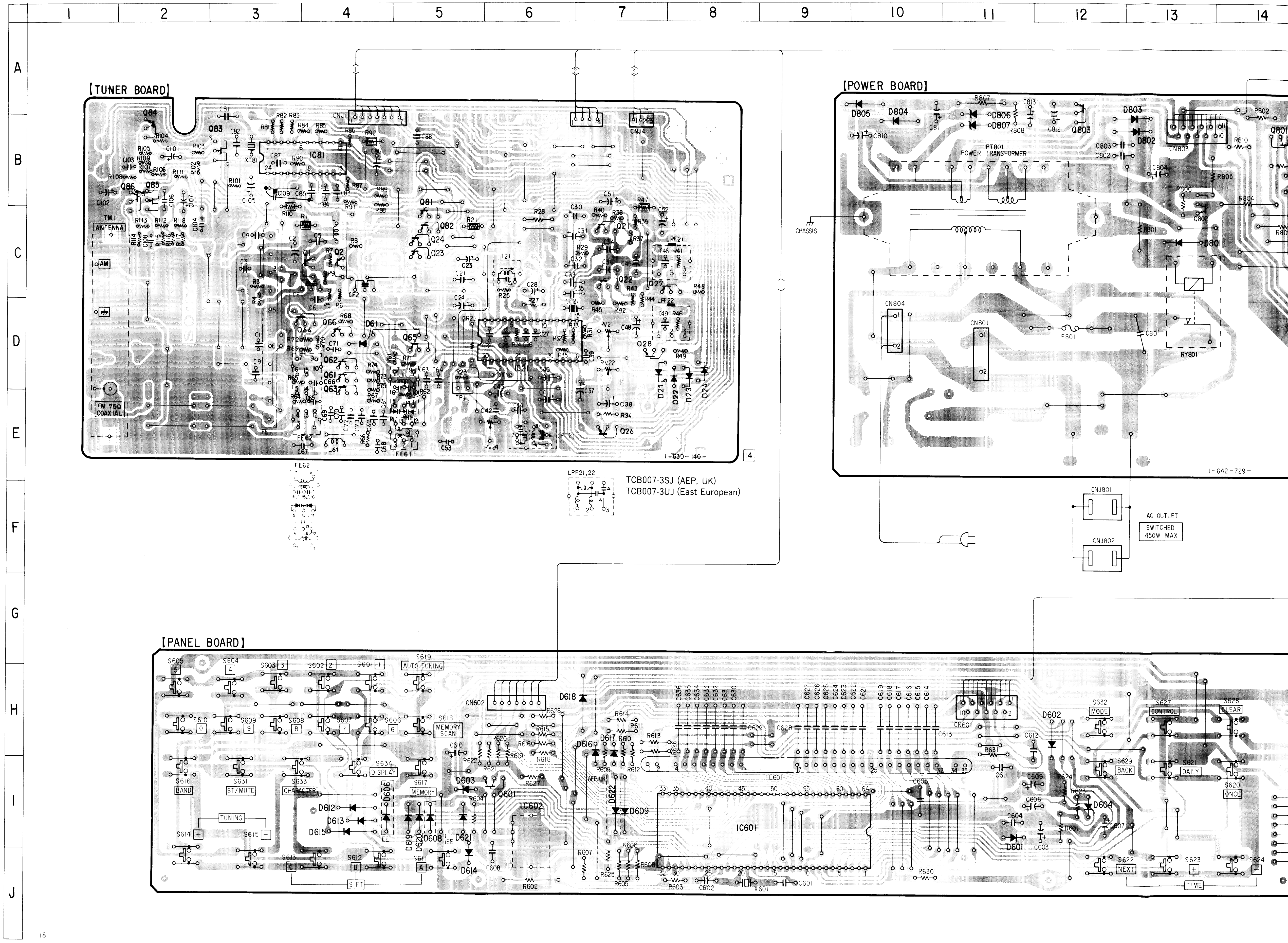
HZS30-2L
UZP-5.6B


cathode
anode

3-2. PRINTED WIRING BOARDS

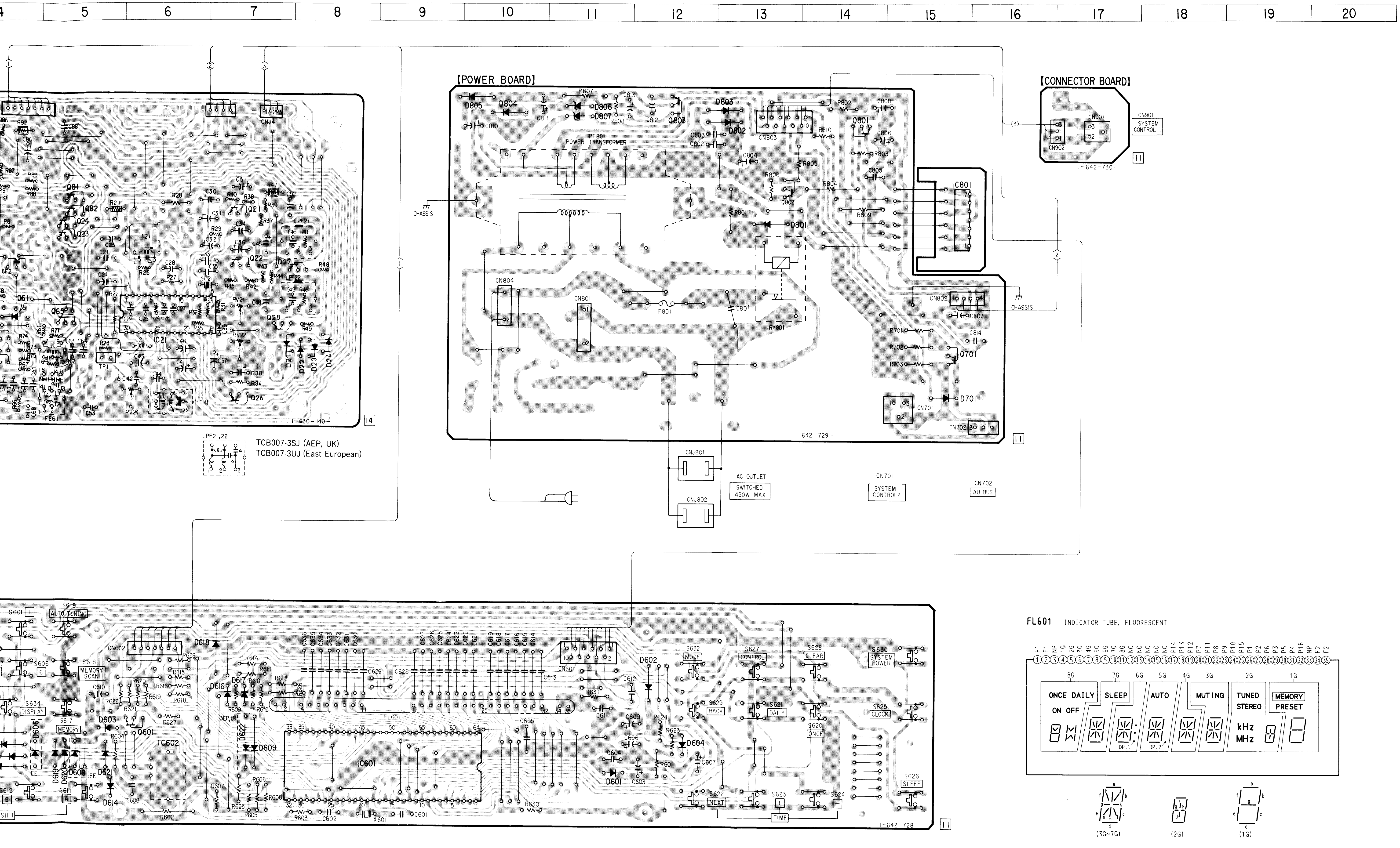
- **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D21	D-7	Q1	C-4
D22	D-8	Q2	C-4
D23	D-8	Q21	C-7
D24	D-8	Q22	C-7
D61	D-4	Q23	C-5
D601	I-11	Q24	C-5
D602	H-12	Q26	E-7
D603	I-5	Q27	C-7
D604	I-12	Q28	D-7
D606	I-5	Q61	D-4
D608	I-5	Q62	D-4
D609	I-7	Q63	D-4
D612	I-4	Q64	D-4
D613	I-4	Q65	D-5
D614	J-5	Q66	D-4
D615	I-4	Q81	B-5
D616	H-7	Q82	C-5
D617	H-7	Q83	B-3
D618	H-7	Q84	B-2
D619	I-5	Q85	B-2
D620	I-5	Q86	B-2
D621	I-5	Q601	I-6
D622	I-7	Q701	D-15
D701	E-15	Q801	B-14
D801	C-13	Q802	B-13
D802	B-13	Q803	A-12
D803	A-13		
D804	A-10		
D805	A-10		
D806	A-11		
D807	B-11		
IC21	D-6		
IC81	B-3		
IC601	I-8		
IC602	I-6		
IC801	C-15		


1
2
3
4
5
6
7
8
9
10
11
12
13
14
A
B
C
D
E
F
G
H
I
J
[TUNER BOARD]
[POWER BOARD]
[PANEL BOARD]
IC81
IC21
IC601
IC602
FL601
TM1 ANTENNA
AM
FM 75Ω COAXIAL
SONY
PT801 POWER TRANSFORMER
CHASSIS
CN804
CN801
F801
RY801
CNJ801
CNJ802
AC OUTLET SWITCHED 450W MAX
1-630-140-
1-642-729-
14
LPF21,22
FE62
TCB007-3SJ (AEP, UK)
TCB007-3UJ (East European)
AUTO TUNING
MEMORY SCAN
DISPLAY
MEMORY
CHARACTER
BAND
ST/MUTE
TUNING
SIFT
MODE
CONTROL
CLEAR
BACK
DAILY
ONCE
NEXT
TIME
AEP,UK
18

Note:

- ○—— : parts extracted from the component side.
- ■ : parts mounted on the conductor side.


4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
[POWER BOARD]
[CONNECTOR BOARD]
CN901
SYSTEM CONTROL I
CN902
1-642-730-
11
PT801
POWER TRANSFORMER
CHASSIS
IC801
CN803
CN804
CN801
F801
RY801
D801
CN802
Q701
D701
CN701
CN702
1-642-729-
11
CNJ801
CNJ802
AC OUTLET
SWITCHED
450W MAX
CN701
SYSTEM
CONTROL2
CN702
AU BUS
CNJ4
IC21
TP1
LPF2
FE61
1-630-140-
14
LPF21,22
TCB007-3SJ (AEP, UK)
TCB007-3UJ (East European)
S601
S619
AUTO TUNING
CN602
S618
MEMORY SCAN
S606
S634
DISPLAY
S617
MEMORY
IC602
Q601
AEP,UK
FL601
IC601
X601
CN601
S632
MODE
S627
CONTROL
S628
CLEAR
S630
SYSTEM POWER
S629
BACK
S621
DAILY
S625
CLOCK
S620
ONCE
S626
SLEEP
S622
NEXT
S623
S624
TIME
1-642-728
11
FL601
INDICATOR TUBE, FLUORESCENT
F1 F1 NP 1G 2G 3G 4G 5G 6G 7G 8G NC NC NC NC P14 P13 P12 P7 P11 P8 P9 P10 P15 P1 P2 P6 P3 P5 P4 P16 NP F2 F2
8G
7G
6G
5G
4G
3G
2G
1G
ONCE DAILY
ON OFF
SLEEP
AUTO
MUTING
TUNED
STEREO
MEMORY
PRESET
kHz
MHz
DP.1
DP.2
(3G~7G)
(2G)
(1G)

3-3. SCHEMATIC DIAGRAMS

Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- △ : internal component.
- ▭ : nonflammable resistor.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

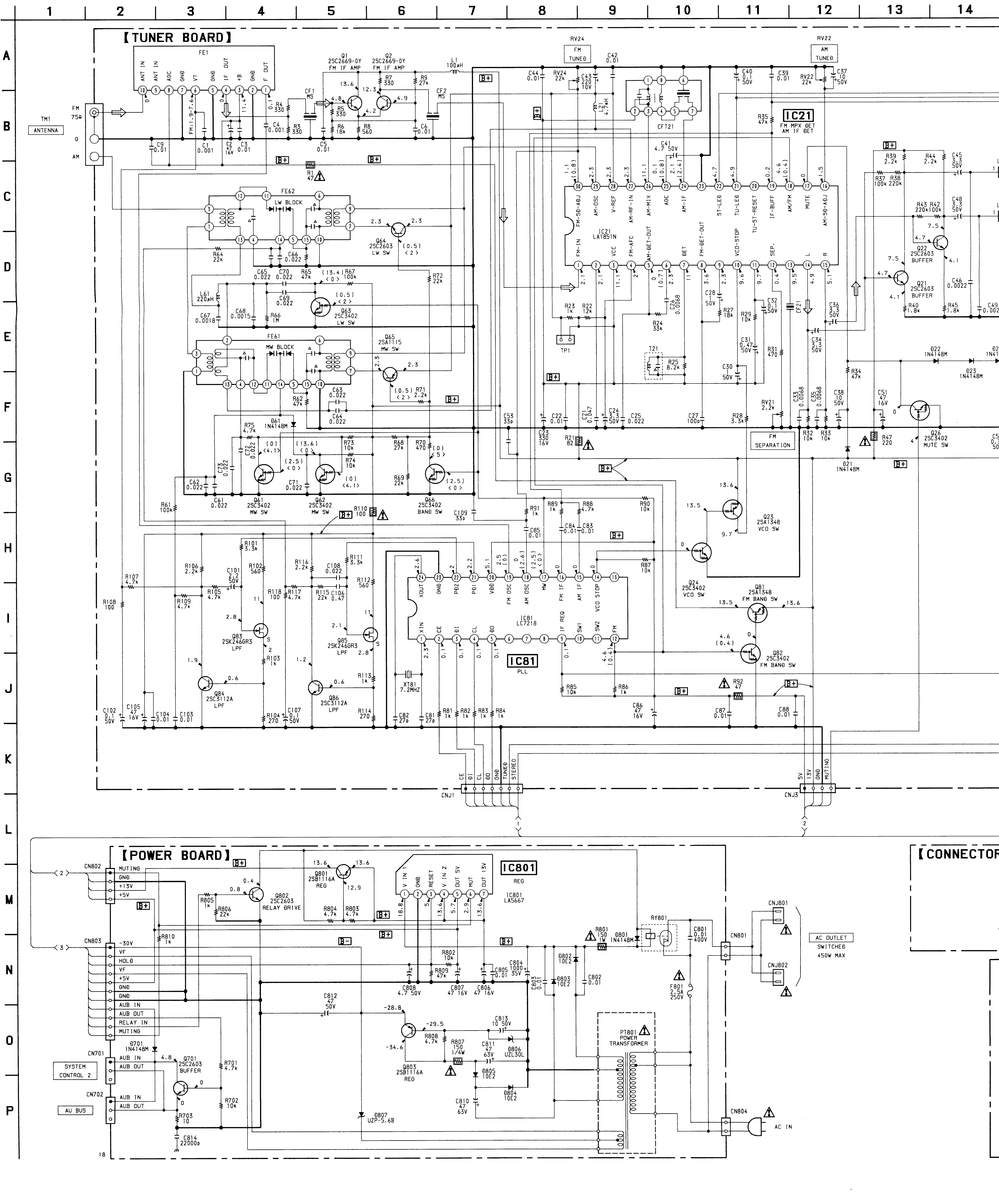
- B+ : B+ Line
- B− : B− Line
- ▭ : adjustment for repair.

no mark : FM ⟨ ⟩ : LW

( ): MW

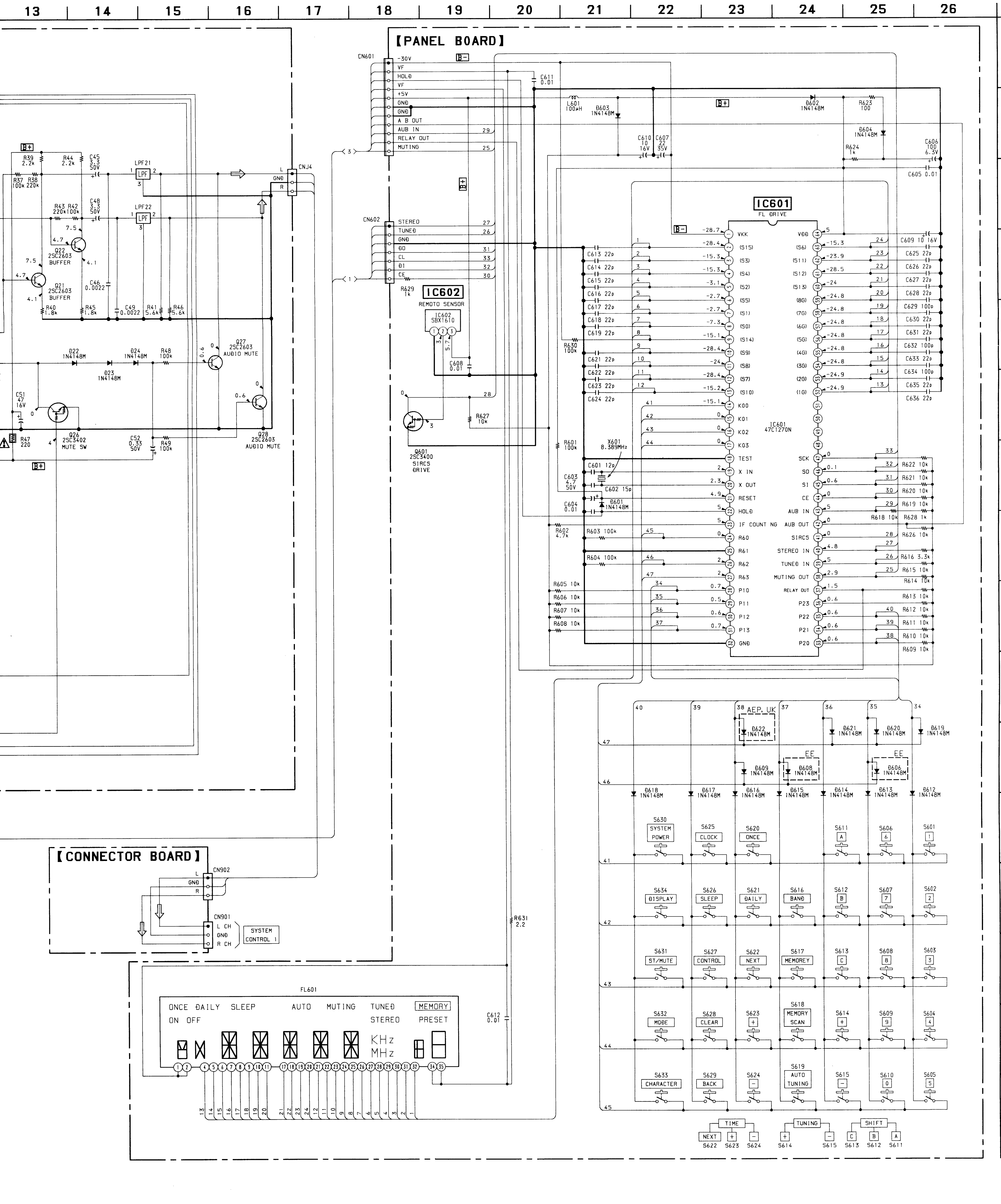
- Voltages are taken with a VOM (Input I Voltage variations may be noted due tion tolerances.
- Signal path.

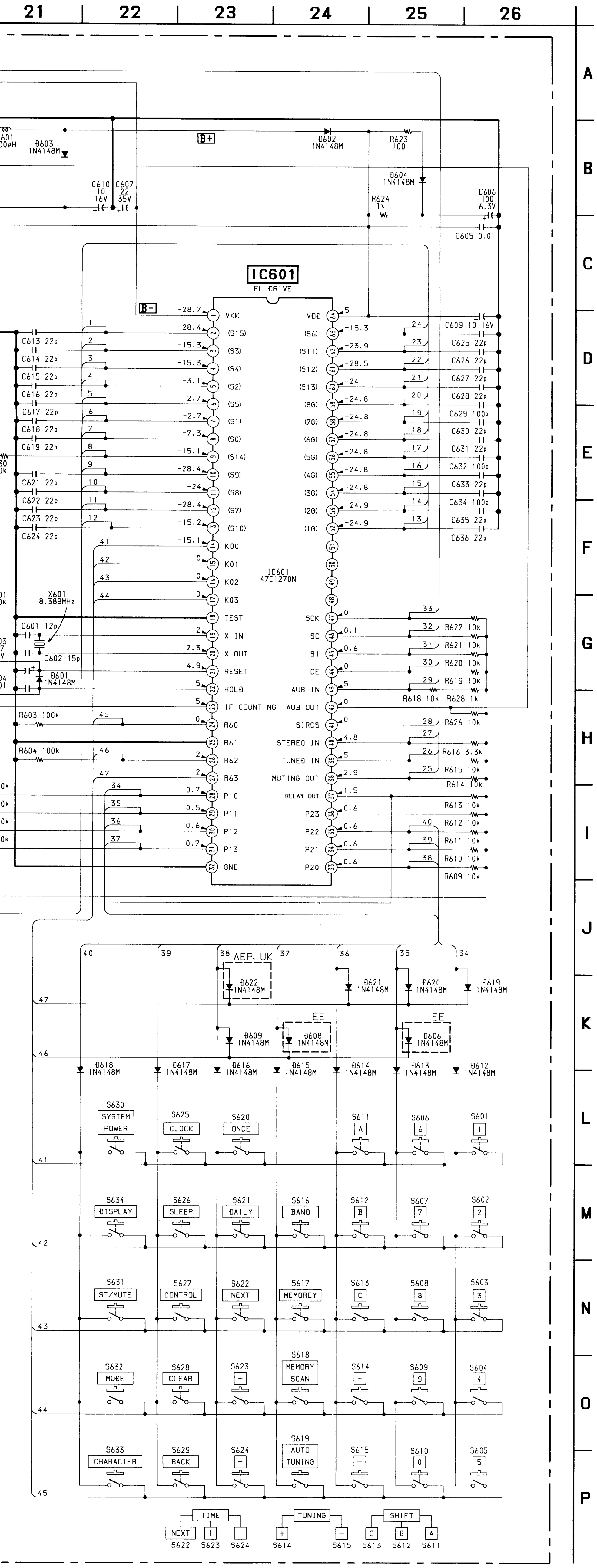
⇨ : FM



【TUNER BOARD】
【POWER BOARD】
【CONNECTOR
TM1 ANTENNA
FM 75Ω
AM
FE1
RV24 FM TUNED
RV22 AM TUNED
Q1 2SC2669-OY FM IF AMP
Q2 2SC2669-OY FM IF AMP
CF1 MS
CF2 MS
L1 100μH
CFT21
IC21 FM MPX DET AM IF DET
IC21 LA1851N
FE62 LW BLOCK
FE61 MW BLOCK
Q64 2SC2603 LW SW
Q63 2SC3402 LW SW
Q65 2SA1115 MW SW
Q61 2SC3402 MW SW
Q62 2SC3402 MW SW
Q66 2SC3402 BAND SW
Q22 2SC2603 BUFFER
Q21 2SC2603 BUFFER
Q26 2SC3402 MUTE SW
Q23 2SA1348 VCO SW
Q24 2SC3402 VCO SW
Q81 2SA1348 FM BAND SW
Q82 2SC3402 FM BAND SW
Q83 2SK246GR3 LPF
Q85 2SK246GR3 LPF
Q84 2SC3112A LPF
Q86 2SC3112A LPF
IC81 PLL
IC81 LC7218
XT81 7.2MHZ
TP1
T21
FM SEPARATION
CNJ1
CNJ3
CE DI CL DO GND TUNED STEREO
5V 13V GND MUTING
CN802
MUTING GND +13V +5V
CN803
-30V VF HOLD VF +5V GND GND AUB IN AUB OUT RELAY IN MUTING
CN701
CN702
SYSTEM CONTROL 2
AU BUS
Q801 2SB1116A REG
Q802 2SC2603 RELAY DRIVE
IC801 REG
IC801 LA5667
Q803 2SB1116A REG
Q701 2SC2603 BUFFER
RY801
CN801
CNJ801
CNJ802
AC OUTLET SWITCHED 450W MAX
F801 2.5A 250V
PT801 POWER TRANSFORMER
CN804
AC IN
D807 UZP-5.6B
D806 UZL30L

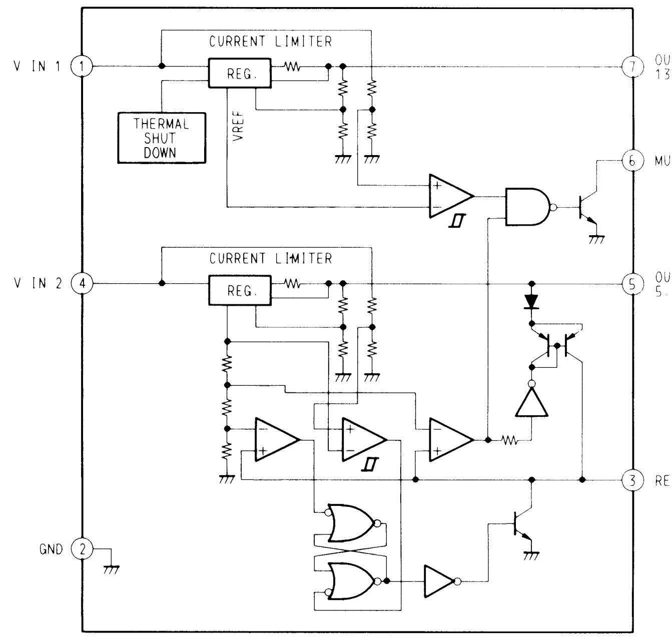
: B+ Line
: B– Line
]: adjustment for repair.
rk: FM 〈 〉: LW
): MW
es are taken with a VOM (Input Impedance 10MΩ).
e variations may be noted due to normal produc-
lerances.
path.
: FM


13
14
15
16
17
18
19
20
21
22
23
24
25
26
【PANEL BOARD】
【CONNECTOR BOARD】
CN601
-30V
VF
HOLD
VF
+5V
GND
GND
A B OUT
AUB IN
RELAY OUT
MUTING
CN602
STEREO
TUNED
GND
D0
CL
D1
CE
IC601
FL DRIVE
IC601 47C1270N
IC602
REMOTO SENSOR
IC602 SBX1610
Q601 2SC3400 SIRCS DRIVE
X601 8.389MHz
L601 100μH
D603 1N4148M
D602 1N4148M
D604 1N4148M
D601 1N4148M
C611 0.01
C610 10 16V
C607 22 35V
C606 100 6.3V
C605 0.01
C609 10 16V
C608 0.01
C601 12p
C602 15p
C603 4.7 50V
C604 0.01
C612 0.01
R623 100
R624 1k
R629 1k
R627 10k
R630 100k
R601 100k
R602 4.7k
R603 100k
R604 100k
R605 10k
R606 10k
R607 10k
R608 10k
R631 2.2
VKK
VDD
TEST
X IN
X OUT
RESET
HOLD
IF COUNT NG
R60
R61
R62
R63
P10
P11
P12
P13
GND
SCK
SO
SI
CE
AUB IN
AUB OUT
SIRCS
STEREO IN
TUNED IN
MUTING OUT
RELAY OUT
P23
P22
P21
P20
K00
K01
K02
K03
R622 10k
R621 10k
R620 10k
R619 10k
R618 10k
R628 1k
R626 10k
R616 3.3k
R615 10k
R614 10k
R613 10k
R612 10k
R611 10k
R610 10k
R609 10k
LPF21
LPF22
CNJ4
R39 2.2k
R44 2.2k
C45 3.3 50V
R37 100k
R38 220k
R43 220k
R42 100k
C48 3.3 50V
Q22 2SC2603 BUFFER
Q21 2SC2603 BUFFER
C46 0.0022
R40 1.8k
R45 1.8k
C49 0.0022
R41 5.6k
R46 5.6k
D22 1N4148M
D24 1N4148M
D23 1N4148M
R48 100k
Q27 2SC2603 AUDIO MUTE
Q28 2SC2603 AUDIO MUTE
Q26 2SC3402 MUTE SW
C51 47 16V
R47 220
C52 0.33 50V
R49 100k
CN902
CN901
L CH
GND
R CH
SYSTEM CONTROL 1
FL601
ONCE DAILY SLEEP AUTO MUTING TUNED MEMORY
ON OFF STEREO PRESET
KHz
MHz
AEP, UK
EE
D622 1N4148M
D621 1N4148M
D620 1N4148M
D619 1N4148M
D609 1N4148M
D608 1N4148M
D606 1N4148M
D618 1N4148M
D617 1N4148M
D616 1N4148M
D615 1N4148M
D614 1N4148M
D613 1N4148M
D612 1N4148M
S630 SYSTEM POWER
S625 CLOCK
S620 ONCE
S611 A
S606 6
S601 1
S634 DISPLAY
S626 SLEEP
S621 DAILY
S616 BAND
S612 B
S607 7
S602 2
S631 ST/MUTE
S627 CONTROL
S622 NEXT
S617 MEMOREY
S613 C
S608 8
S603 3
S632 MODE
S628 CLEAR
S623 +
S618 MEMORY SCAN
S614 +
S609 9
S604 4
S633 CHARACTER
S629 BACK
S624 −
S619 AUTO TUNING
S615 −
S610 0
S605 5
TIME
NEXT
+
−
S622 S623 S624
TUNING
S614 S615
SHIFT
C B A
S613 S612 S611

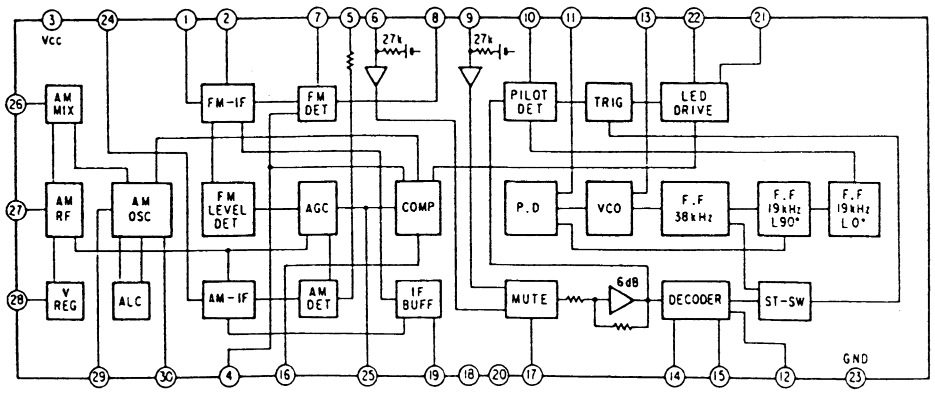

21
22
23
24
25
26
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
IC601
FL DRIVE
IC601
47C1270N
B+
B-
D602 1N4148M
R623 100
D603 1N4148M
D604 1N4148M
R624 1k
C610 10 16V
C607 22 35V
C606 100 6.3V
C605 0.01
C609 10 16V
VKK
VDD
TEST
X IN
X OUT
RESET
HOLD
IF COUNT NG
AUB IN
AUB OUT
SIRCS
STEREO IN
TUNED IN
MUTING OUT
RELAY OUT
GND
X601 8.389MHz
C601 12p
C602 15p
D601 1N4148M
R603 100k
R604 100k
AEP, UK
EE
D622 1N4148M
D621 1N4148M
D620 1N4148M
D619 1N4148M
D609 1N4148M
D608 1N4148M
D606 1N4148M
D618 1N4148M
D617 1N4148M
D616 1N4148M
D615 1N4148M
D614 1N4148M
D613 1N4148M
D612 1N4148M
S630 SYSTEM POWER
S625 CLOCK
S620 ONCE
S611 A
S606 6
S601 1
S634 DISPLAY
S626 SLEEP
S621 DAILY
S616 BAND
S612 B
S607 7
S602 2
S631 ST/MUTE
S627 CONTROL
S622 NEXT
S617 MEMOREY
S613 C
S608 8
S603 3
S632 MODE
S628 CLEAR
S623 +
S618 MEMORY SCAN
S614 +
S609 9
S604 4
S633 CHARACTER
S629 BACK
S624 −
S619 AUTO TUNING
S615 −
S610 0
S605 5
TIME
TUNING
SHIFT
NEXT
S622
S623
S624
S614
S615
S613
S612
S611

- **IC Block Diagrams**

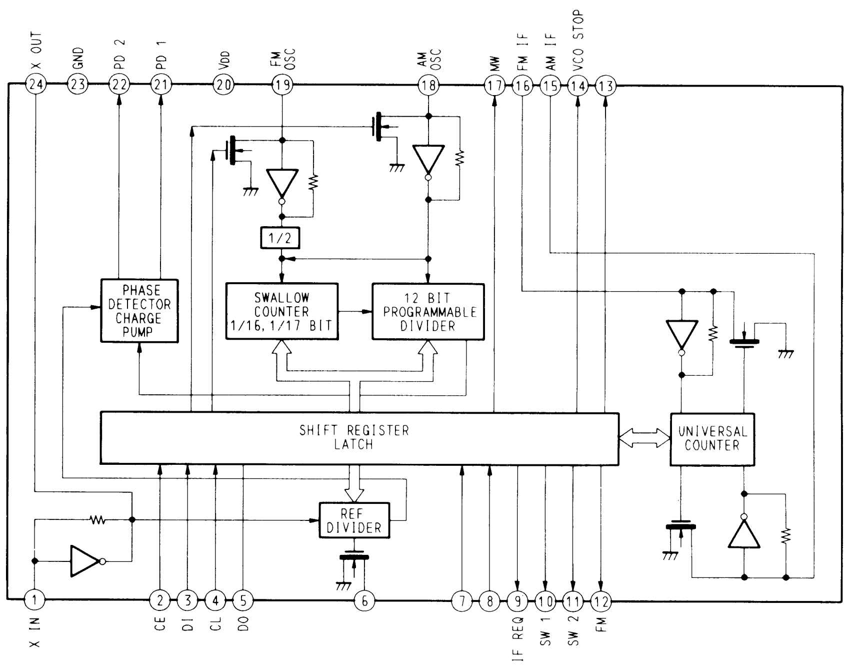
IC801 LA5667


V IN 1
V IN 2
GND
CURRENT LIMITER
REG.
THERMAL SHUT DOWN
VREF
OUT 13V
MUTE
OUT2 5.6V
RESET

IC21 LA1851N


Vcc
27k
AM MIX
FM-IF
FM DET
PILOT DET
TRIG
LED DRIVE
AM RF
AM OSC
FM LEVEL DET
AGC
COMP
P.D
VCO
F.F 38kHz
F.F 19kHz L90°
F.F 19kHz L0°
V REG
ALC
AM-IF
AM DET
IF BUFF
MUTE
6dB
DECODER
ST-SW
GND

IC81 LC7218


X OUT
GND
PD 2
PD 1
VDD
FM OSC
AM OSC
MW
FM IF
AM IF
VCO STOP
1/2
PHASE DETECTOR CHARGE PUMP
SWALLOW COUNTER 1/16, 1/17 BIT
12 BIT PROGRAMMABLE DIVIDER
SHIFT REGISTER LATCH
UNIVERSAL COUNTER
REF DIVIDER
X IN
CE
DI
CL
DO
IF REQ
SW 1
SW 2
FM

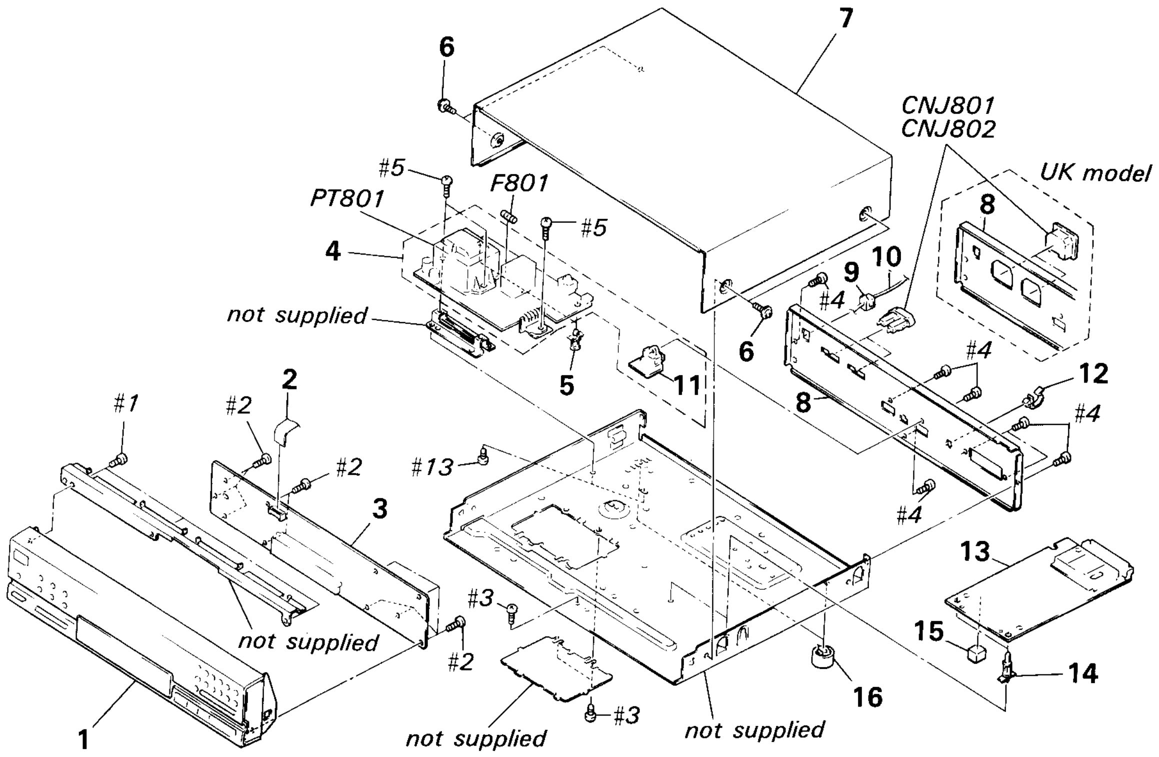
SECTION 4
EXPLODED VIEWS

NOTE:
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE(WHITE)...(RED)
  ↑ ↑
  Parts color Cabinet's color

- Items marked " ＊ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- hardware (#mark) list is given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

EE : East European Model



Ref. No.	Part No.	Description	Remark
1	X-4942-442-1	PANEL ASSY (507). FRONT (FOR LBT-D507;AEP, UK, EE)	
1	X-4942-445-1	PANEL ASSY (607). FRONT (FOR LBT-D607;AEP, UK)	
2	1-575-666-11	WIRE, FLAT TYPE (11 CORE)	
* 3	A-4347-291-A	PANEL BOARD, COMPLETE (AEP)	
* 3	A-4347-292-A	PANEL BOARD, COMPLETE (UK)	
* 3	A-4347-294-A	PANEL BOARD, COMPLETE (EE)	
* 4	A-4347-277-A	POWER BOARD, COMPLETE (AEP, EE)	
* 4	A-4347-278-A	POWER BOARD, COMPLETE (UK)	
* 5	3-349-025-31	HOLDER, PC BOARD	
6	3-363-099-01	SCREW (CASE +3X8 TP2)	
* 7	4-939-802-31	CASE	
* 8	4-950-668-11	PANEL, BACK (AEP, EE)	
* 8	4-950-668-21	PANEL, BACK (UK)	
* 9	3-703-244-00	BUSHING (2104), CORD	

Ref. No.	Part No.	Description	Remark
⚠10	1-575-651-11	CORD, POWER (AEP, EE)	
⚠10	1-575-652-11	CORD, POWER (UK)	
* 11	1-642-730-11	CONNECTOR BOARD	
* 12	4-949-235-01	HOOK	
* 13	A-4347-288-A	TUNER BOARD, COMPLETE (AEP, UK)	
* 13	A-4347-290-A	TUNER BOARD, COMPLETE (EE)	
* 14	4-924-098-31	HOLDER, PC BOARD	
15	9-911-849-XX	CUSHION	
16	4-931-169-01	FOOT	
⚠F801	1-532-286-00	FUSE, TIME-LAG	
⚠PT801	1-449-979-11	TRANSFORMER, POWER	
⚠CNJ801	1-526-794-11	OUTLET, AC (AEP, EE)	
⚠CNJ802	1-526-794-11	OUTLET, AC (AEP, EE)	
⚠CNJ801	1-526-751-00	OUTLET, AC (UK)	
⚠CNJ802	1-526-751-00	OUTLET, AC (UK)	

SECTION 5
ELECTRICAL PARTS LIST

PANEL **POWER** **CONNECTOR**

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- RESISTORS
  All resistors are in ohms
  METAL:Metal-film resistor
  METAL OXIDE:Metal Oxide-film resistor
  F:nonflammable

- Items marked " ＊ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ , for example:
  uA...: μA..., uPA...: μPA...,
  uPB...: μPB..., uPC...: μPC...,
  uPD...: μPD...
- CAPACITORS
  uF: μF
- COILS
  uH: μH

When indication parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description			Remark
*	A-4347-294-A	PANEL BOARD, COMPLETE (EE)			
*	A-4347-292-A	PANEL BOARD, COMPLETE (UK)			
*	A-4347-291-A	PANEL BOARD, COMPLETE (AEP)			
		***************************			
*	A-4347-278-A	POWER BOARD, COMPLETE (UK)			
*	A-4347-277-A	POWER BOARD, COMPLETE (AEP, EE)			
		******************************			
		CONNECTOR BOARD			
		***************			
*	4-921-941-01	CUSHION (FL)			
*	4-923-103-01	HOLDER, FL TUBE			
		< CAPACITOR >			
C601	1-162-201-31	CERAMIC	12PF	5%	50V
C602	1-162-203-31	CERAMIC	15PF	5%	50V
C603	1-126-163-11	ELECT	4.7uF	20%	50V
C604	1-164-096-11	CERAMIC	0.01uF		50V
C605	1-161-379-00	CERAMIC	0.01uF	20%	25V
C606	1-126-177-11	ELECT	100uF	20%	10V
C607	1-124-916-11	ELECT	22uF	20%	63V
C608	1-164-096-11	CERAMIC	0.01uF		50V
C609	1-126-157-11	ELECT	10uF	20%	16V
C610	1-126-157-11	ELECT	10uF	20%	16V
C611	1-164-096-11	CERAMIC	0.01uF		50V
C612	1-164-096-11	CERAMIC	0.01uF		50V
C613	1-162-207-31	CERAMIC	22PF	5%	50V
C614	1-162-207-31	CERAMIC	22PF	5%	50V
C615	1-162-207-31	CERAMIC	22PF	5%	50V
C616	1-162-207-31	CERAMIC	22PF	5%	50V
C617	1-162-207-31	CERAMIC	22PF	5%	50V
C618	1-162-207-31	CERAMIC	22PF	5%	50V
C619	1-162-207-31	CERAMIC	22PF	5%	50V

Ref. No.	Part No.	Description			Remark
C621	1-162-207-31	CERAMIC	22PF	5%	50V
C622	1-162-207-31	CERAMIC	22PF	5%	50V
C623	1-162-207-31	CERAMIC	22PF	5%	50V
C624	1-162-207-31	CERAMIC	22PF	5%	50V
C625	1-162-207-31	CERAMIC	22PF	5%	50V
C626	1-162-207-31	CERAMIC	22PF	5%	50V
C627	1-162-207-31	CERAMIC	22PF	5%	50V
C628	1-162-207-31	CERAMIC	22PF	5%	50V
C629	1-162-282-31	CERAMIC	100PF	10%	50V
C630	1-162-207-31	CERAMIC	22PF	5%	50V
C631	1-162-207-31	CERAMIC	22PF	5%	50V
C632	1-162-282-31	CERAMIC	100PF	10%	50V
C633	1-162-207-31	CERAMIC	22PF	5%	50V
C634	1-162-282-31	CERAMIC	100PF	10%	50V
C635	1-162-207-31	CERAMIC	22PF	5%	50V
C636	1-162-207-31	CERAMIC	22PF	5%	50V
C801	1-161-744-00	CERAMIC	0.01uF		400V
C802	1-101-004-00	CERAMIC	0.01uF		50V
C803	1-101-004-00	CERAMIC	0.01uF		50V
C804	1-126-105-11	ELECT	1000uF	20%	35V
C805	1-164-096-11	CERAMIC	0.01uF		50V
C806	1-126-022-11	ELECT	47uF	20%	16V
C807	1-126-022-11	ELECT	47uF	20%	16V
C808	1-126-163-11	ELECT	4.7uF	20%	50V
C810	1-124-918-11	ELECT	47uF	20%	63V
C811	1-124-918-11	ELECT	47uF	20%	63V
C812	1-124-910-11	ELECT	47uF	20%	50V
C813	1-126-059-11	ELECT	10uF	20%	50V
C814	1-162-596-11	CERAMIC	0.022uF		50V
		< CONNECTOR >			
* CN601	1-568-854-11	SOCKET, CONNECTOR 11P			
* CN602	1-568-273-11	SOCKET, CONNECTOR 7P			

Ref. No.	Part No.	De
* CN702	1-565-561-11	P
CN801	1-535-139-00	B
* CN802	1-568-308-11	SC
* CN803	1-568-830-11	SC
* CN804	1-564-321-00	P
* CN901	1-569-625-41	SC
CN902	1-568-269-11	SC
		<
D601	8-719-987-63	DI
D602	8-719-987-63	DI
D603	8-719-987-63	DI
D604	8-719-987-63	DI
D606	8-719-987-63	DI
D608	8-719-987-63	DI
D609	8-719-987-63	DI
D612	8-719-987-63	DI
D613	8-719-987-63	DI
D614	8-719-987-63	DI
D615	8-719-987-63	DI
D616	8-719-987-63	DI
D617	8-719-987-63	DI
D618	8-719-987-63	DI
D619	8-719-987-63	DI
D620	8-719-987-63	DI
D621	8-719-987-63	DI
D622	8-719-987-63	DI
D701	8-719-987-63	DI
D801	8-719-987-63	DI
D802	8-719-200-77	DI
D803	8-719-200-77	DI
D804	8-719-200-77	DI
D805	8-719-200-77	DI
D806	8-719-934-22	DI
D807	8-719-014-66	DI
		<
⚠F801	1-532-286-00	FU
		<
* FH801	1-533-213-31	HO
* FH802	1-533-213-31	HO
		<
FL601	1-519-728-11	IN

The components ident
mark ⚠ or dotted line w
⚠ are critical for safety.
Replace only with part
specified.

reference
e board name.

tified by
with mark
number

	Remark
5%	50V
5%	50V
5%	50V
5%	50V
5%	50V
5%	50V
5%	50V
5%	50V
10%	50V
5%	50V
5%	50V
10%	50V
5%	50V
10%	50V
5%	50V
5%	50V
	400V
	50V
	50V
20%	35V
	50V
20%	16V
20%	16V
20%	50V
20%	63V
20%	63V
20%	50V
20%	50V
	50V

Ref. No.	Part No.	Description	Remark
* CN702	1-565-561-11	PIN, CONNECTOR 3P	
CN801	1-535-139-00	BASE POST 22MM (10MM PITCH) 2P	
* CN802	1-568-308-11	SOCKET, CONNECTOR 4P	
* CN803	1-568-830-11	SOCKET, CONNECTOR 11P	
* CN804	1-564-321-00	PIN, CONNECTOR 2P	
* CN901	1-569-625-41	SOCKET, CONNECTOR 3P	
CN902	1-568-269-11	SOCKET, CONNECTOR 3P	
		< DIODE >	
D601	8-719-987-63	DIODE 1N4148M	
D602	8-719-987-63	DIODE 1N4148M	
D603	8-719-987-63	DIODE 1N4148M	
D604	8-719-987-63	DIODE 1N4148M	
D606	8-719-987-63	DIODE 1N4148M (EE)	
D608	8-719-987-63	DIODE 1N4148M (EE)	
D609	8-719-987-63	DIODE 1N4148M	
D612	8-719-987-63	DIODE 1N4148M	
D613	8-719-987-63	DIODE 1N4148M	
D614	8-719-987-63	DIODE 1N4148M	
D615	8-719-987-63	DIODE 1N4148M	
D616	8-719-987-63	DIODE 1N4148M	
D617	8-719-987-63	DIODE 1N4148M	
D618	8-719-987-63	DIODE 1N4148M	
D619	8-719-987-63	DIODE 1N4148M	
D620	8-719-987-63	DIODE 1N4148M	
D621	8-719-987-63	DIODE 1N4148M	
D622	8-719-987-63	DIODE 1N4148M (AEP, UK)	
D701	8-719-987-63	DIODE 1N4148M	
D801	8-719-987-63	DIODE 1N4148M	
D802	8-719-200-77	DIODE 10E2N	
D803	8-719-200-77	DIODE 10E2N	
D804	8-719-200-77	DIODE 10E2N	
D805	8-719-200-77	DIODE 10E2N	
D806	8-719-934-22	DIODE HZS30-2L	
D807	8-719-014-66	DIODE UZP-5. 6B	
		< FUSE >	
⚠F801	1-532-286-00	FUSE, TIME-LAG (2. 5A/250V)	
		< FUSE HOLDER >	
* FH801	1-533-213-31	HOLDER, FUSE	
* FH802	1-533-213-31	HOLDER, FUSE	
		< FLUORESCENT INDICATOR >	
FL601	1-519-728-11	INDICATOR TUBE, FLUORESCENT	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description				Remark
		< IC >				
IC601	8-759-053-98	IC TMP47C1270AN-H204				
IC602	8-741-100-48	IC SBX1610-59				
IC801	8-759-820-09	IC LA5667				
		< TRANSFORMER >				
PT801	1-449-979-11	TRANSFORMER, POWER				
		< TRANSISTOR >				
Q601	8-729-900-36	TRANSISTOR DTC124ES				
Q701	8-729-620-05	TRANSISTOR 2SC2603-EF				
Q801	8-729-140-04	TRANSISTOR 2SB1116A-L				
Q802	8-729-620-05	TRANSISTOR 2SC2603-EF				
Q803	8-729-140-04	TRANSISTOR 2SB1116A-L				
		< RESISTOR >				
R601	1-249-441-11	CARBON	100K	5%	1/4W	
R602	1-249-429-11	CARBON	10K	5%	1/4W	
R603	1-249-441-11	CARBON	100K	5%	1/4W	
R604	1-249-441-11	CARBON	100K	5%	1/4W	
R605	1-249-429-11	CARBON	10K	5%	1/4W	
R606	1-249-429-11	CARBON	10K	5%	1/4W	
R607	1-249-429-11	CARBON	10K	5%	1/4W	
R608	1-249-429-11	CARBON	10K	5%	1/4W	
R609	1-249-429-11	CARBON	10K	5%	1/4W	
R610	1-249-429-11	CARBON	10K	5%	1/4W	
R611	1-249-429-11	CARBON	10K	5%	1/4W	
R612	1-249-429-11	CARBON	10K	5%	1/4W	
R613	1-249-425-11	CARBON	4. 7K	5%	1/4W	
R614	1-249-429-11	CARBON	10K	5%	1/4W	
R615	1-249-429-11	CARBON	10K	5%	1/4W	
R616	1-249-423-11	CARBON	3. 3K	5%	1/4W	
R618	1-249-417-11	CARBON	1K	5%	1/4W	
R619	1-249-429-11	CARBON	10K	5%	1/4W	
R620	1-249-429-11	CARBON	10K	5%	1/4W	
R621	1-249-429-11	CARBON	10K	5%	1/4W	
R622	1-249-429-11	CARBON	10K	5%	1/4W	
R623	1-249-405-11	CARBON	100	5%	1/4W	
R624	1-249-417-11	CARBON	1K	5%	1/4W	
R625	1-249-441-11	CARBON	100K	5%	1/4W	
R626	1-249-429-11	CARBON	10K	5%	1/4W	
R627	1-249-429-11	CARBON	10K	5%	1/4W	
R628	1-249-417-11	CARBON	1K	5%	1/4W	
R629	1-249-417-11	CARBON	1K	5%	1/4W	
R630	1-249-441-11	CARBON	100K	5%	1/4W	
R631	1-249-421-11	CARBON	2. 2	5%	1/4W	
R701	1-249-425-11	CARBON	4. 7K	5%	1/4W	
R702	1-249-429-11	CARBON	10K	5%	1/4W	
R703	1-249-393-11	CARBON	10	5%	1/4W	

Ref. No.	Part No.	Description				Remark
⚠R801	1-215-864-00	METAL OXIDE	150	5%	1W	F
R802	1-249-429-11	CARBON	10K	5%	1/4W	
R803	1-249-425-11	CARBON	4. 7K	5%	1/4W	
R804	1-249-425-11	CARBON	4. 7K	5%	1/4W	
R805	1-249-417-11	CARBON	1K	5%	1/4W	
R806	1-249-433-11	CARBON	22K	5%	1/4W	
⚠R807	1-247-702-11	CARBON	150	5%	1/4W	F
R808	1-249-425-11	CARBON	4. 7K	5%	1/4W	
R809	1-249-437-11	CARBON	47K	5%	1/4W	
R810	1-249-417-11	CARBON	1K	5%	1/4W	
		< RELAY >				
RY801	1-515-617-11	RELAY				
		< SWITCH >				
S601	1-554-303-21	SWITCH, TACTILE (1)				
S602	1-554-303-21	SWITCH, TACTILE (2)				
S603	1-554-303-21	SWITCH, TACTILE (3)				
S604	1-554-303-21	SWITCH, TACTILE (4)				
S605	1-554-303-21	SWITCH, TACTILE (5)				
S606	1-554-303-21	SWITCH, TACTILE (6)				
S607	1-554-303-21	SWITCH, TACTILE (7)				
S608	1-554-303-21	SWITCH, TACTILE (8)				
S609	1-554-303-21	SWITCH, TACTILE (9)				
S610	1-554-303-21	SWITCH, TACTILE (0)				
S611	1-554-303-21	SWITCH, TACTILE (SHIFT A)				
S612	1-554-303-21	SWITCH, TACTILE (SHIFT B)				
S613	1-554-303-21	SWITCH, TACTILE (SHIFT C)				
S614	1-554-303-21	SWITCH, TACTILE (TUNING +)				
S615	1-554-303-21	SWITCH, TACTILE (TUNING -)				
S616	1-554-303-21	SWITCH, TACTILE (BAND)				
S617	1-554-303-21	SWITCH, TACTILE (MEMORY)				
S618	1-554-303-21	SWITCH, TACTILE (MEMORY SCAN)				
S619	1-554-303-21	SWITCH, TACTILE (AUTO TUNING)				
S620	1-554-303-21	SWITCH, TACTILE (ONCE)				
S621	1-554-303-21	SWITCH, TACTILE (DAILY)				
S622	1-554-303-21	SWITCH, TACTILE (TIME NEXT)				
S623	1-554-303-21	SWITCH, TACTILE (TIME +)				
S624	1-554-303-21	SWITCH, TACTILE (TIME -)				
S625	1-554-303-21	SWITCH, TACTILE (CLOCK)				
S626	1-554-303-21	SWITCH, TACTILE (SLEEP)				
S627	1-554-303-21	SWITCH, TACTILE (CONTROL)				
S628	1-554-303-21	SWITCH, TACTILE (CLEAR)				
S629	1-554-303-21	SWITCH, TACTILE (BACK)				
S630	1-554-303-21	SWITCH, TACTILE (SYSTEM POWER)				
S631	1-554-303-21	SWITCH, TACTILE (ST/MUTE)				
S632	1-554-303-21	SWITCH, TACTILE (MODE)				
S633	1-554-303-21	SWITCH, TACTILE (CHARACTER)				

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description				Remark
S634	1-554-303-21	SWITCH, TACTILE (DISPLAY)				
		< CRYSTAL >				
X601	1-579-564-11	VIBRATOR, CRYSTAL (8. 389MHz)				
**						
*	A-4347-290-A	TUNER BOARD, COMPLETE (EE)				
*	A-4347-288-A	TUNER BOARD, COMPLETE (AEP, UK)				
		*****************************				
	1-589-204-11	TUNER BOARD (AEP, EE, UK)				
*	4-924-988-11	PLATE (ST), GROUND				
		< CAPACITOR >				
C1	1-162-294-31	CERAMIC	1000PF	20%	25V	
C2	1-124-477-11	ELECT	47uF	20%	25V	
C3	1-163-059-00	CERAMIC CHIP	0. 01uF	20%	16V	
C4	1-162-294-31	CERAMIC	1000PF	20%	25V	
C5	1-163-059-00	CERAMIC CHIP	0. 01uF	20%	16V	
C6	1-163-059-00	CERAMIC CHIP	0. 01uF	20%	16V	
C9	1-163-059-00	CERAMIC CHIP	0. 01uF	20%	16V	
C21	1-101-006-00	CERAMIC	0. 047uF		50V	
C22	1-163-059-00	CERAMIC CHIP	0. 01uF	20%	16V	
C23	1-124-119-00	ELECT	330uF	20%	16V	
C24	1-123-382-00	ELECT	3. 3uF	20%	100V	
C25	1-163-063-00	CERAMIC CHIP	22000PF		25V	
C26	1-163-019-00	CERAMIC CHIP	6800PF	20%	12V	
C27	1-162-516-11	CERAMIC CHIP	100PF	10%	50V	
C28	1-124-903-11	ELECT	1uF	20%	50V	
C30	1-124-903-11	ELECT	1uF	20%	50V	
C31	1-124-902-00	ELECT	0. 47uF	20%	50V	
C32	1-124-463-00	ELECT	0. 1uF	20%	50V	
C33	1-130-481-00	MYLAR	0. 0068uF	5%	50V	
C34	1-123-382-00	ELECT	3. 3uF	20%	100V	
C35	1-130-481-00	MYLAR	0. 0068uF	5%	50V	
C36	1-123-382-00	ELECT	3. 3uF	20%	100V	
C37	1-124-907-11	ELECT	10uF	20%	50V	
C38	1-124-907-11	ELECT	10uF	20%	50V	
C39	1-163-059-00	CERAMIC CHIP	0. 01uF	20%	16V	
C40	1-124-463-00	ELECT	0. 1uF	20%	50V	
C41	1-124-927-11	ELECT	4. 7uF	20%	100V	
C42	1-163-059-00	CERAMIC CHIP	0. 01uF	20%	16V	
C43	1-126-176-11	ELECT	220uF	20%	10V	
C44	1-163-059-00	CERAMIC CHIP	0. 01uF	20%	16V	
C45	1-123-382-00	ELECT	3. 3uF	20%	100V	
C46	1-161-375-00	CERAMIC	2200PF	20%	25V	
C48	1-123-382-00	ELECT	3. 3uF	20%	100V	
C49	1-161-375-00	CERAMIC	2200PF	20%	25V	

TUNER

Ref. No.	Part No.	Description			Remark
C51	1-124-477-11	ELECT	47uF	20%	25V
C52	1-124-252-00	ELECT	0.33uF	20%	50V
C53	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C61	1-163-063-00	CERAMIC CHIP	22000PF		25V
C62	1-163-063-00	CERAMIC CHIP	22000PF		25V
C63	1-163-063-00	CERAMIC CHIP	22000PF		25V
C64	1-163-063-00	CERAMIC CHIP	22000PF		25V
C65	1-163-063-00	CERAMIC CHIP	22000PF		25V
C66	1-163-063-00	CERAMIC CHIP	22000PF		25V
C67	1-102-120-00	CERAMIC	0.0018uF	10%	50V
C68	1-163-011-11	CERAMIC CHIP	1500PF	20%	25V
C69	1-163-063-00	CERAMIC CHIP	22000PF		25V
C70	1-163-063-00	CERAMIC CHIP	22000PF		25V
C71	1-163-063-00	CERAMIC CHIP	22000PF		25V
C72	1-163-063-00	CERAMIC CHIP	22000PF		25V
C73	1-163-063-00	CERAMIC CHIP	22000PF		25V
C81	1-102-961-00	CERAMIC	27PF	5%	50V
C82	1-102-961-00	CERAMIC	27PF	5%	50V
C83	1-163-059-00	CERAMIC CHIP	0.01uF	20%	16V
C84	1-163-059-00	CERAMIC CHIP	0.01uF	20%	16V
C85	1-163-059-00	CERAMIC CHIP	0.01uF	20%	16V
C86	1-124-477-11	ELECT	47uF	20%	25V
C87	1-163-059-00	CERAMIC CHIP	0.01uF	20%	16V
C88	1-163-059-00	CERAMIC CHIP	0.01uF	20%	16V
C101	1-124-925-11	ELECT	2.2uF	20%	100V
C102	1-124-463-00	ELECT	0.1uF	20%	50V
C103	1-163-059-00	CERAMIC CHIP	0.01uF	20%	16V
C104	1-163-059-00	CERAMIC CHIP	0.01uF	20%	16V
C105	1-124-477-11	ELECT	47uF	20%	25V
C106	1-136-173-00	FILM	0.47uF	5%	50V
C107	1-124-463-00	ELECT	0.1uF	20%	50V
C108	1-163-063-00	CERAMIC CHIP	22000PF		25V
C109	1-102-963-00	CERAMIC	33PF	5%	50V

< CERAMIC FILTER >

CF1	1-567-389-11	FILTER, CERAMIC
CF2	1-567-389-11	FILTER, CERAMIC
CF21	1-577-075-11	OSCILLATOR, CERAMIC
CFT21	1-404-853-11	TRANSFORMER, IF (CERAMIC FILTER)

< CONNECTOR >

* CNJ1	1-568-273-11	SOCKET, CONNECTOR 7P
* CNJ3	1-568-308-11	SOCKET, CONNECTOR 4P
CNJ4	1-568-269-11	SOCKET, CONNECTOR 3P

< DIODE >

Ref. No.	Part No.	Description		Remark
D21	8-719-987-63	DIODE	1N4148M	
D22	8-719-987-63	DIODE	1N4148M	
D23	8-719-987-63	DIODE	1N4148M	
D24	8-719-987-63	DIODE	1N4148M	
D61	8-719-987-63	DIODE	1N4148M	

< FRONT END >

FE1	1-463-862-21	FRONT END, FM (AEP, UK)
FE1	1-465-560-11	FRONT END (FM 3 GANG) (EE)
FE61	1-236-462-11	ENCAPSULATED COMPONENT
FE62	1-236-463-11	ENCAPSULATED COMPONENT

< IC >

IC21	8-759-821-45	IC	LA1851N
IC81	8-759-820-91	IC	LC7218

< COIL >

L1	1-410-645-31	INDUCTOR	100uH
L21	1-407-500-00	INDUCTOR	4.7mH
L61	1-410-525-11	INDUCTOR	220uH

< LOW PASS FILTER >

LPF21	1-235-164-00	FILTER, LOW PASS
LPF22	1-235-164-00	FILTER, LOW PASS

< TRANSISTOR >

Q1	8-729-230-XX	TRANSISTOR	2SC2669-OY
Q2	8-729-230-XX	TRANSISTOR	2SC2669-OY
Q21	8-729-119-78	TRANSISTOR	2SC2785-HFE
Q22	8-729-119-78	TRANSISTOR	2SC2785-HFE
Q23	8-729-900-61	TRANSISTOR	DTA114ES
Q24	8-729-900-80	TRANSISTOR	DTC114ES
Q26	8-729-900-80	TRANSISTOR	DTC114ES
Q27	8-729-620-05	TRANSISTOR	2SC2603-EF
Q28	8-729-620-05	TRANSISTOR	2SC2603-EF
Q61	8-729-900-80	TRANSISTOR	DTC114ES
Q62	8-729-900-80	TRANSISTOR	DTC114ES
Q63	8-729-900-80	TRANSISTOR	DTC114ES
Q64	8-729-620-05	TRANSISTOR	2SC2603-EF
Q65	8-729-119-76	TRANSISTOR	2SA1175-HFE
Q66	8-729-900-80	TRANSISTOR	DTC114ES
Q81	8-729-900-61	TRANSISTOR	DTA114ES
Q82	8-729-900-80	TRANSISTOR	DTC114ES
Q83	8-729-202-67	TRANSISTOR	2SK246-GR3
Q84	8-729-230-93	TRANSISTOR	2SC3113-AB
Q85	8-729-202-67	TRANSISTOR	2SK246-GR3
Q86	8-729-230-93	TRANSISTOR	2SC3113-AB

< RESISTOR >

⚠R1	1-249-401-11	CARBON	47	5%	1/4W	F
R3	1-249-329-11	CARBON MELF	330	5%	1/8W	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

TUNER

Ref. No.	Part No.	Description				Remark
R4	1-249-329-11	CARBON MELF	330	5%	1/8W	
R5	1-249-329-11	CARBON MELF	330	5%	1/8W	
R6	1-249-350-11	CARBON MELF	18K	5%	1/8W	
R7	1-249-329-11	CARBON MELF	330	5%	1/8W	
R8	1-249-332-11	CARBON MELF	560	5%	1/8W	
R9	1-249-352-11	CARBON MELF	27K	5%	1/8W	
⚠R21	1-249-404-00	CARBON	82	5%	1/4W	F
R22	1-249-430-11	CARBON	12K	5%	1/4W	
R23	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R24	1-249-353-11	CARBON MELF	33K	5%	1/8W	
R25	1-249-346-11	CARBON MELF	8.2K	5%	1/8W	
R27	1-249-432-11	CARBON	18K	5%	1/4W	
R28	1-249-423-11	CARBON	3.3K	5%	1/4W	
R29	1-249-347-11	CARBON MELF	10K	5%	1/8W	
R31	1-249-331-11	CARBON MELF	470	5%	1/8W	
R32	1-249-347-11	CARBON MELF	10K	5%	1/8W	
R33	1-249-347-11	CARBON MELF	10K	5%	1/8W	
R34	1-249-425-11	CARBON	4.7K	5%	1/4W	
R35	1-249-355-11	CARBON MELF	47K	5%	1/8W	
R37	1-249-359-11	CARBON MELF	100K	5%	1/8W	
R38	1-249-363-11	CARBON MELF	220K	5%	1/8W	
R39	1-249-339-11	CARBON MELF	2.2K	5%	1/8W	
R40	1-249-338-11	CARBON MELF	1.8K	5%	1/8W	
R41	1-249-344-11	CARBON MELF	5.6K	5%	1/8W	
R42	1-249-359-11	CARBON MELF	100K	5%	1/8W	
R43	1-249-363-11	CARBON MELF	220K	5%	1/8W	
R44	1-249-339-11	CARBON MELF	2.2K	5%	1/8W	
R45	1-249-338-11	CARBON MELF	1.8K	5%	1/8W	
R46	1-249-344-11	CARBON MELF	5.6K	5%	1/8W	
⚠R47	1-249-409-11	CARBON	220	5%	1/4W	F
R48	1-249-359-11	CARBON MELF	100K	5%	1/8W	
R49	1-249-359-11	CARBON MELF	100K	5%	1/8W	
R61	1-249-359-11	CARBON MELF	100K	5%	1/8W	
R62	1-249-355-11	CARBON MELF	47K	5%	1/8W	
R64	1-249-351-11	CARBON MELF	22K	5%	1/8W	
R65	1-249-355-11	CARBON MELF	47K	5%	1/8W	
R66	1-215-493-00	METAL	1M	5%	1/4W	
R67	1-249-359-11	CARBON MELF	100K	5%	1/8W	
R68	1-249-352-11	CARBON MELF	27K	5%	1/8W	
R69	1-249-351-11	CARBON MELF	22K	5%	1/8W	
R70	1-249-331-11	CARBON MELF	470	5%	1/8W	
R71	1-249-339-11	CARBON MELF	2.2K	5%	1/8W	
R72	1-249-351-11	CARBON MELF	22K	5%	1/8W	
R73	1-249-347-11	CARBON MELF	10K	5%	1/8W	
R74	1-249-347-11	CARBON MELF	10K	5%	1/8W	
R75	1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
R81	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R82	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R83	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R84	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R85	1-249-347-11	CARBON MELF	10K	5%	1/8W	
R86	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R87	1-249-347-11	CARBON MELF	10K	5%	1/8W	
R88	1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
R89	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R90	1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
R91	1-249-335-11	CARBON MELF	1K	5%	1/8W	
⚠R92	1-249-401-11	CARBON	47	5%	1/4W	F
R101	1-249-341-11	CARBON MELF	3.3K	5%	1/8W	
R102	1-249-332-11	CARBON MELF	560	5%	1/8W	
R103	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R104	1-249-328-11	CARBON MELF	270	5%	1/8W	
R105	1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
R106	1-249-339-11	CARBON MELF	2.2K	5%	1/8W	
R107	1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
R108	1-249-323-11	CARBON MELF	100	5%	1/8W	
R109	1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
⚠R110	1-249-405-11	CARBON	100	5%	1/4W	F
R111	1-249-341-11	CARBON MELF	3.3K	5%	1/8W	
R112	1-249-332-11	CARBON MELF	560	5%	1/8W	
R113	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R114	1-249-328-11	CARBON MELF	270	5%	1/8W	
R115	1-249-351-11	CARBON MELF	22K	5%	1/8W	
R116	1-249-339-11	CARBON MELF	2.2K	5%	1/8W	
R117	1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
R118	1-249-323-11	CARBON MELF	100	5%	1/8W	
		< VARIABLE RESISTOR >				
RV21	1-238-013-11	RES, ADJ, CARBON 2.2K				
RV22	1-238-017-11	RES, ADJ, CARBON 22K				
RV24	1-238-017-11	RES, ADJ, CARBON 22K				
		< TRANSFORMER >				
T21	1-404-807-11	TRANSFORMER, DISCRIMINATOR				
		< TERMINAL BOARD >				
* TM1	1-537-138-31	TERMINAL BOARD (ANT)				
		< TEST POINT >				
* TP1	1-560-060-00	PIN, CONNECTOR 2P				
		< CRYSTAL >				
XT81	1-577-126-11	VIBRATOR, CRYSTAL (7.2MHz)				

****

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
------	--------	-----------	------
		MISCELLANEOUS	
		*************	
⚠10	1-575-651-11	CORD, POWER (AEP, EE)	
⚠10	1-575-652-11	CORD, POWER (UK)	
2	1-575-666-11	WIRE, FLAT TYPE (11 CORE)	
⚠CNJ801	1-526-751-00	OUTLET, AC (UK)	
⚠CNJ801	1-526-794-11	OUTLET, AC (AEP, EE)	
⚠CNJ802	1-526-751-00	OUTLET, AC (UK)	
⚠CNJ802	1-526-794-11	OUTLET, AC (AEP, EE)	

****

ACCESSORIES & PACKING MATERIALS

****

Ref. No.	Part No.	Description
	4-920-940-01	SHEET (A), PROTECTION
*	4-929-563-01	CUSHION
*	4-952-208-01	INDIVIDUAL CARTON (FOR LBT-D507;AEP)
*	4-952-209-01	INDIVIDUAL CARTON (FOR LBT-D607;AEP)

****

HARDWARE LIST

Ref. No.	Part No.	Description
#1	7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S
#2	7-621-773-93	SCREW (PANEL 2.6 TP2)
#3	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S
#4	7-621-849-00	SCREW (BV/RING)
#5	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

9-957-004-11

Sony Corporation
Audio Group

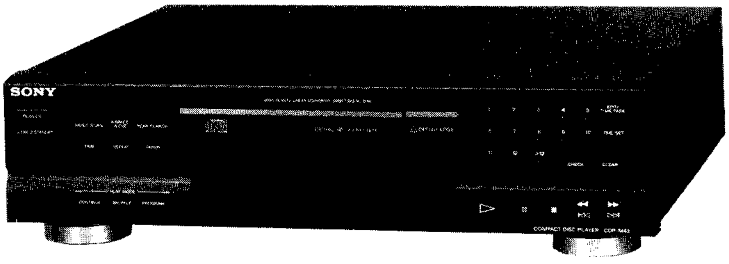
English
92B1863-1
Printed in Japan
©1992.2
Published by Customer Relations and Service Group

CDP-M43/M54

SERVICE MANUAL

AEP Model
UK Model
E Model
Australian Model
CDP-M43

AEP Model
UK Model
E Model
CDP-M54



CDP-M43 is the CD player section in
LBT-D507/ D607/ D707,
LBT-A50/A60/A70 series

Photo : CDP-M43

Model Name Using Similar Mechanism	CDP-497/597
CD Mechanism Type	CDM-14L-5BD8A
Optical Pick-Up Block Type	BU-5BD8A

SPECIFICATIONS

Compact disc player

Frequency response	2 Hz to 20 kHz ±0.5 dB
Signal-to-noise ratio	More than 105 dB··········CDP-M54 More than 100 dB··········CDP-M43
Dynamic range	More than 98 dB ··········CDP-M54 More than 92 dB ··········CDP-M43
Harmonic distortion	Less than 0.003%··········CDP-M54 Less than 0.004%··········CDP-M43
Channel separation	More than 102 dB··········CDP-M54 More than 95 dB ··········CDP-M43

Outputs

LINE OUT (FIXED)(phono jacks)
Output level 2 V(at 50 kilohms)
Load impedance over 10 kilohms
LINE OUT (VARIABLE)(phono jacks)···········CDP-M54
Output level max. 2 V(at 50 kilohms)
Load impedance over 50 kilohms
PHONES (stereo phone jack)···········CDP-M54
Output level max. 10 mW
Load impedance 32 ohms

General

Power requirements	European model: 220 – 230V AC, 50/60Hz UK, Australian model: 240 V AC, 50Hz E model: 110 – 120, 220 – 240V AC, 50/60Hz
Power consumption	12 W
Dimensions (approx., including projections)	355 × 95 × 325 mm(w/h/d) (14 × 3¾ × 12 ⅞ inches)
Weight (approx.)	3.2 kg(7 lbs 1 oz)

Remote commander	(RM-D597)···········CDP-M54
Remote control system	Infrared control
Power requirements	3 V DC with two R6 (size AA) batteries
Dimensions (approx., including projections)	40 × 20 × 175 mm (w/h/d) (1 5/8 × 13/16 × 7 inches)
Weight (approx.)	95 g(4 oz)

Supplied accessories

Audio cord	(1)(2 Phono plugs-2 phono plugs)
Remote commander	(1)···········CDP-M54
Sony SUM-3 (NS) batteries	(2)···········CDP-M54

Design and specifications are subject to change without notice.

CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

This Compact Disc player is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT label is located on the rear exterior.

MICROFILM

COMPACT DISC PLAYER

SONY®

TABLE OF CONTENTS

Section *Title* *Page*

Specifications ·· 1

1. GENERAL

1-1 Identifying the Parts ······································ 4

2. DISASSEMBLY ·· 5

3. ELECTRICAL BLOCK CHECKING ···················· 6

4. DIAGRAMS

4-1 Block Diagram ·· 8
4-2 Circuit Boards Location ································ 10
4-3 Semiconductor Lead Layouts ························ 11
4-4 Printed Wiring Boards ·································· 12
4-5 Schematic Diagram ······································ 15
4-6 IC Block Diagrams ······································ 20

5. EXPLODED VIEWS

5-1 cabinet section ·· 22
5-2 MD section (CDM14-5BD8A) ························ 24
5-3 Optical Pick-up Block (BU-5BD8A) ················ 25

6. ELECTRICAL PARTS LIST ······························ 26

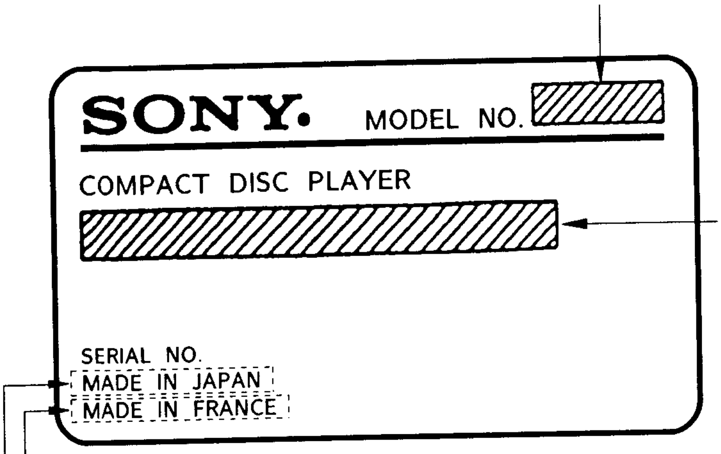
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

MODEL IDENTIFICATION

- Specification Label -

CDP-M54
CDP-M43



AEP, Italian Model :
AC 220 - 230V ~ 50/60Hz
E, Saudi Alabia Model :
AC 110 - 120, 220 - 240V, ~ 50/60Hz 12W
UK, Australian Model :
AC 240V ~ 50/60Hz

Identify the set with the indication of "MADE IN FRANCE" here.
Identify the set with the indication of "MADE IN JAPAN" here.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

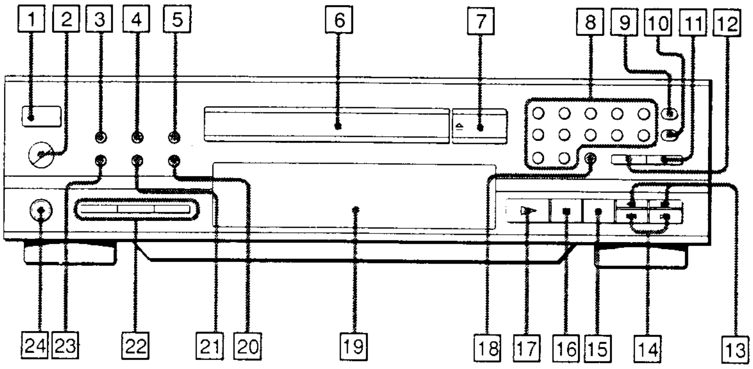
The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe more than 30cm away from the objective lens.

SECTION 1
GENERAL

This section is extracted from instruction manual.

1-1 IDENTIFYING THE PARTS

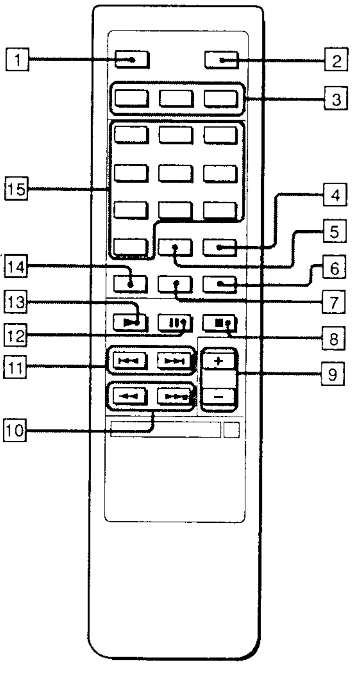
CDP-M54 model



Front Panel

1 POWER switch (20)
2 LINE OUT/PHONE LEVEL control (14)
3 MUSIC SCAN button (40)
4 A.SPACE/A.CUE button (28, 62)
5 PEAK SEARCH button (60)
6 Disc tray (20)
7 ⏏ OPEN/CLOSE button (20)
8 Numeric buttons (24, 38, 48, 52)
9 EDIT/TIME FADE button (52, 58)
10 TIME SET button (54, 58)
11 CLEAR (program clear) button (36, 42)
12 CHECK (program check) button (36)
13 ◀◀/▶▶(manual search) buttons (26, 46)
14 ⏮/⏭ (AMS*) buttons (24, 48)
15 ■ (stop) button (22)
16 ❚❚ (pause) button (22)
17 ▶ (play) button (22)
18 >12 (over 12) button (24)
19 Display window (20)
20 FADER button (46)
21 REPEAT button (44)
22 Play mode buttons
    CONTINUE button (30, 34, 38, 56)
    SHUFFLE button (30, 34, 38, 56)
    PROGRAM button (34, 48)
23 TIME button (22)
24 PHONES jack

* AMS is the abbreviation of Automatic Music Sensor.



Remote Commander ······CDP-M54

1 A. SPACE/A. CUE button (28, 62)
2 MUSIC SCAN button (40)
3 Play mode buttons
    CONTINUE button (30, 34, 38, 56)
    SHUFFLE button (30, 34, 38, 56)
    PROGRAM button (34, 48)
4 CLEAR (program clear) button (36, 42)
5 >10 (over 10) button (24)
6 FADER button (46)
7 REPEAT button (44)
8 ■ (stop) button (22)
9 LINE OUT LEVEL buttons (14)
10 ◀◀/▶▶ (manual search) buttons (26, 46)
11 ⏮/⏭ (AMS*) buttons (24, 48)
12 ❚❚ (pause) button (22)
13 ▶ (play) button (22)
14 TIME button (22)
15 Numeric buttons (24, 38, 48, 52)

* AMS is the abbreviation of Automatic Music Sensor.

SECTION 2
DISASSEMBLY

Note :

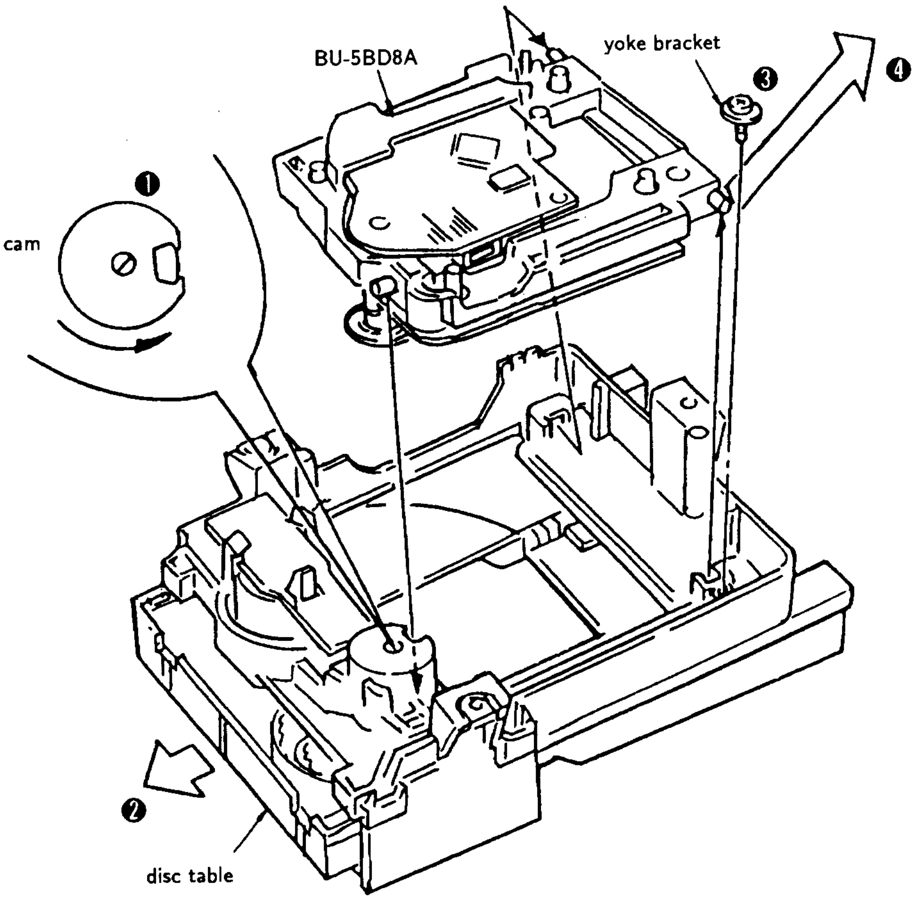
Follow the disassembly procedure in the nomerical order given.

❶ Turn the cam to the direction of arrow (Counter clock wise) by minus screw driver.

❷ Take off the disc table.

❸ Remove the yoke bracket.

❹ Remove the MD (BU-5BD8A) to the direction of arrow.

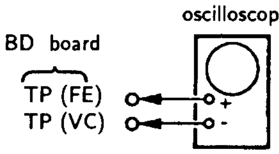

BU-5BD8A
yoke bracket
❸
❹
❶
cam
❷
disc table

SECTION 3
ELECTRICAL BLOCK CHECKING

Note :

1. CD Block basically constructed to operate with-out adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10MΩ im-pedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

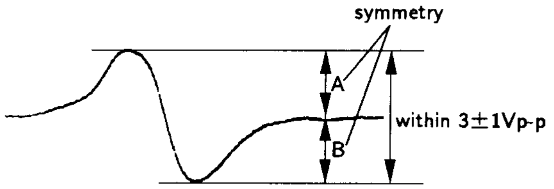
S Curve Check



Procedure :

1. Connect oscilloscope to test point TP (FE) on BD board.
2. Connect between test point TP (FEI) and TP (VC) by lead wire.
3. Turned Power switch on and actuate the focus serch. (actuate the focus serch when disc table is moving in and out.)
4. Check the oscilloscope waveform (S curve) is symmetrical between A and B. And confirm peak to peak level within 3±1Vp-p.

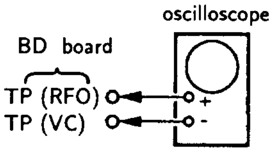
S curve waveform



5. After check, remove the lead wire connected in step 2.

Note : • Try to mesure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.
• Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check



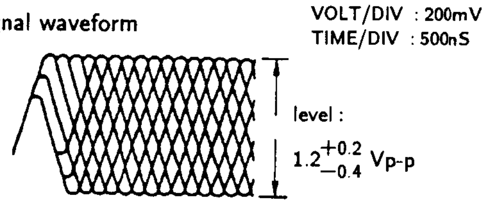
Procedure :

1. Connect oscilloscope to test point TP (RFO) on BD board.
2. Turn Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

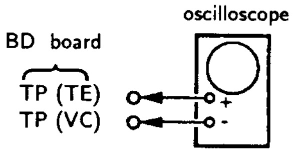
Note :

Clear RF signal waveform means that the shape "◇" can be clearly distinguished at the center of the wave-form.

RF signal waveform



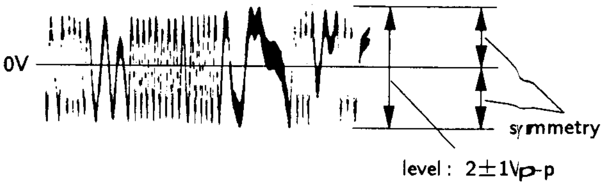
E-F Balance Check



Procedure :

1. Connect test point TP (ADJ) to ground and TP (TEI) to TP (VC) with lead wire.
2. Connect oscilloscope to test point TP (TE) on BD board.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the osilloscope waveform is sym-metrical on the top and bottom in relation to 0V, and check this level.

Traverse oscilloscope

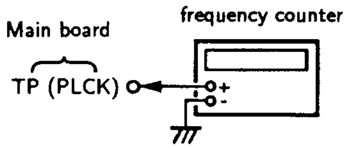


6. Remove the lead wire connected in step 1.

RF PLL Free-run Frequency Check

Procedure :

1. Connect frequency counter to test point (PLCK) with lead wire.

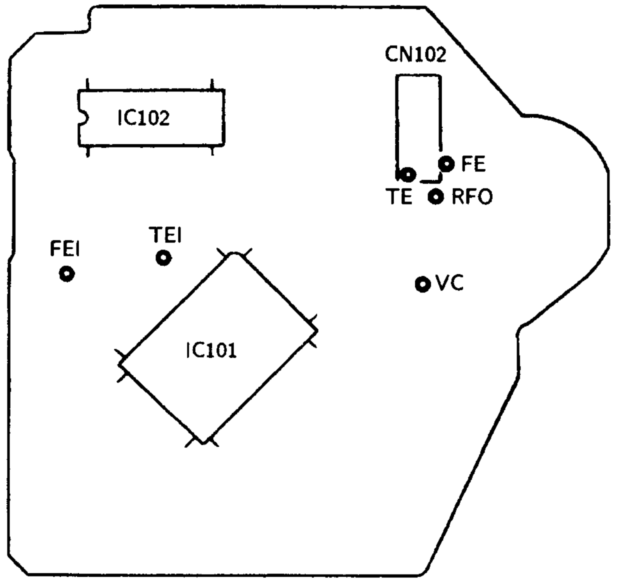

Main board
frequency counter
TP (PLCK)
+
-

2. Turn Power switch on.
3. Confirm that reading on frequency counter is 4. 3218 MHz.

Adjustment Location :

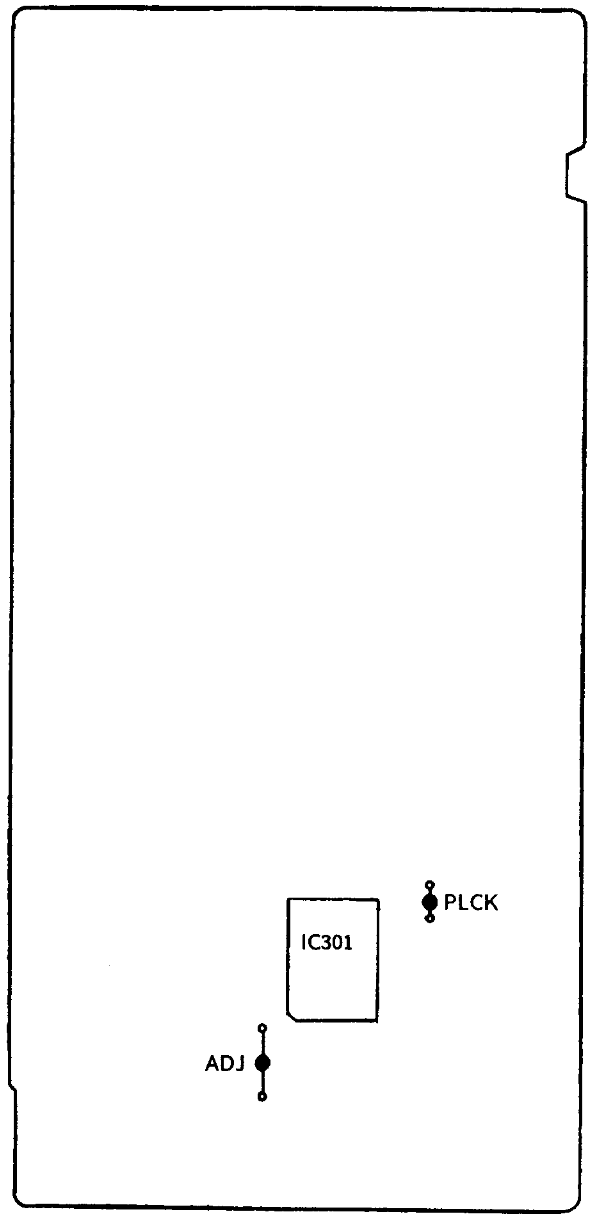
【BD BOARD】

- Solder side -


CN102
IC102
FE
TE
RFO
FEI
TEI
VC
IC101

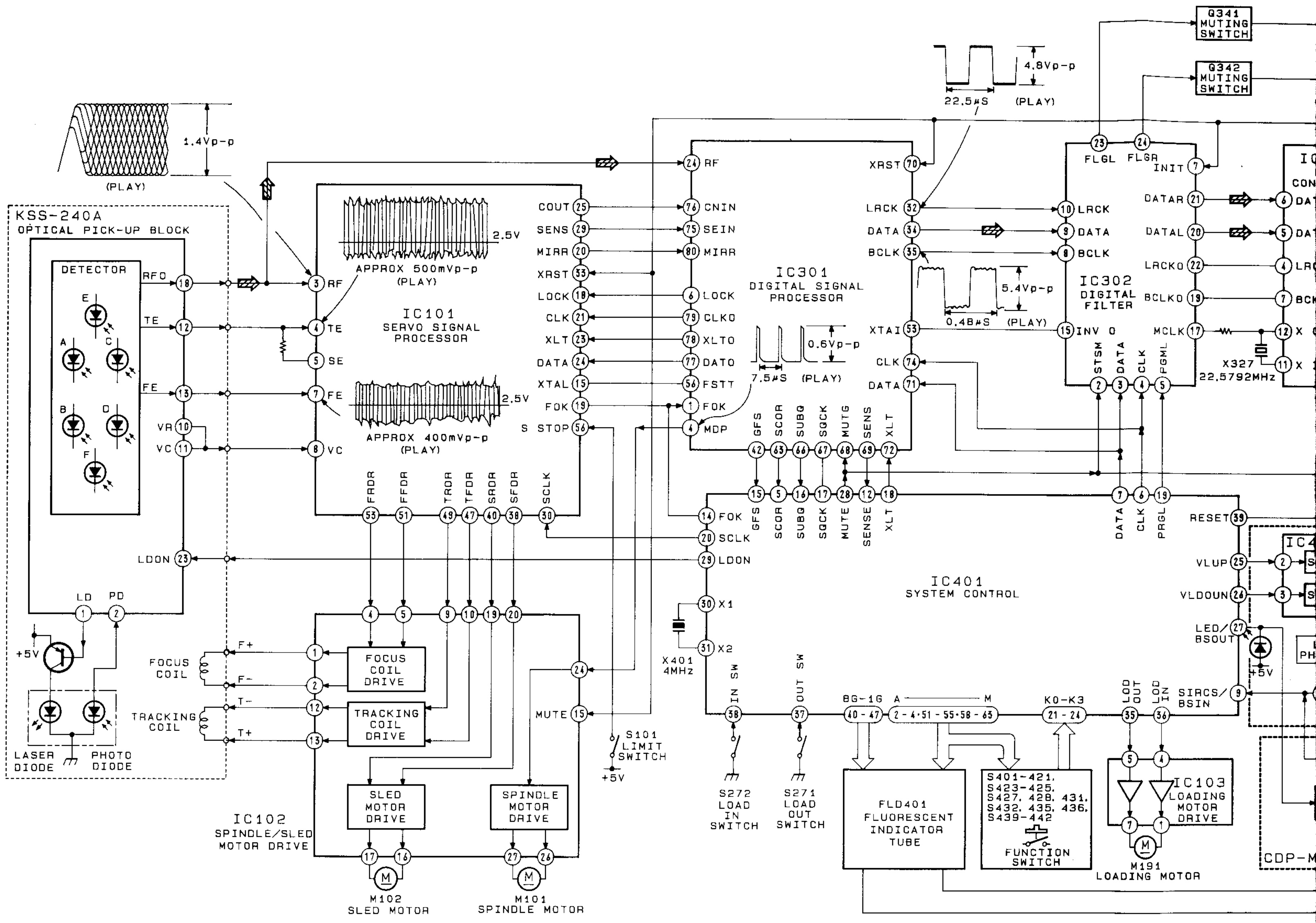
【MAIN BOARD】

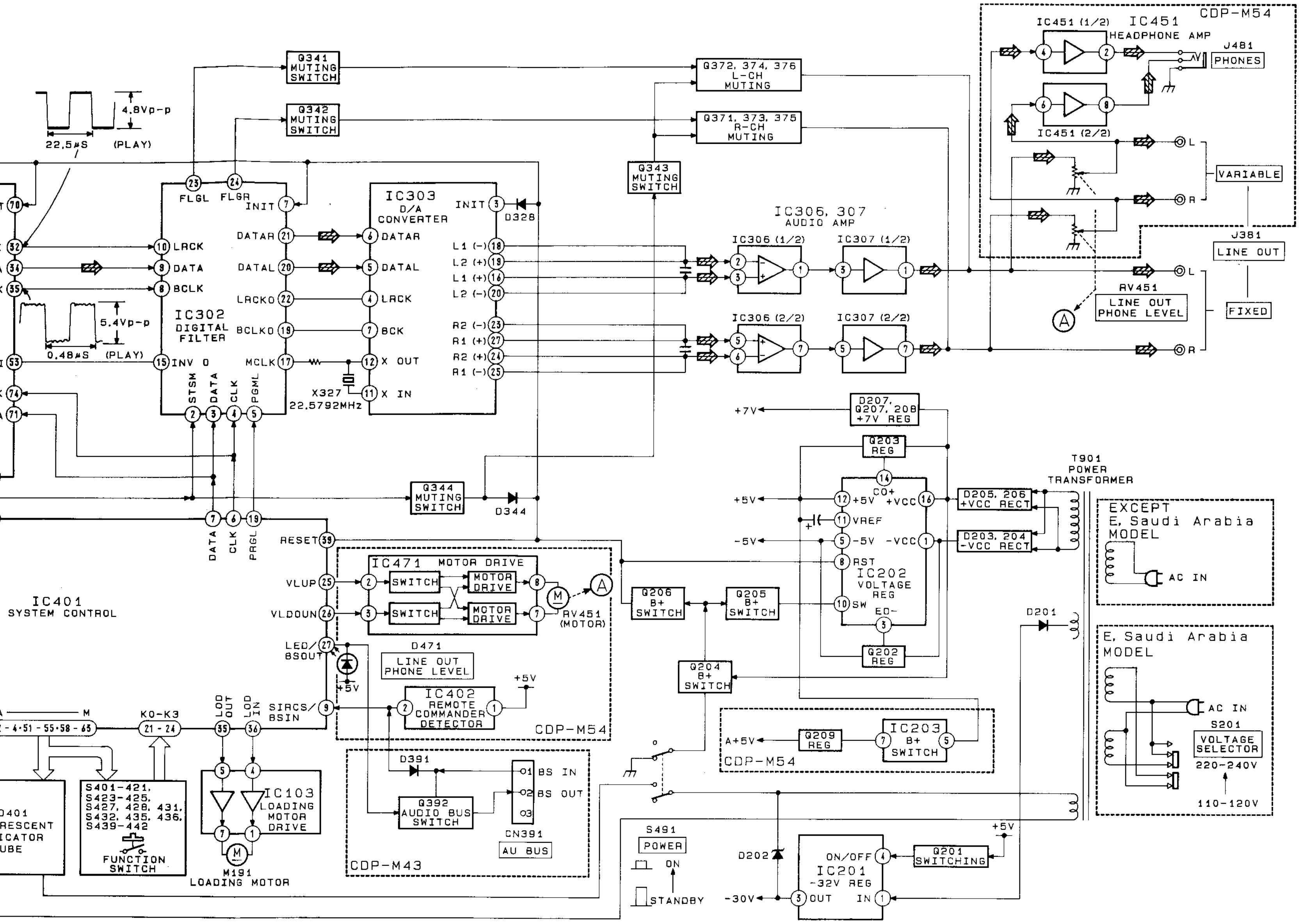
- Component side -


PLCK
IC301
ADJ

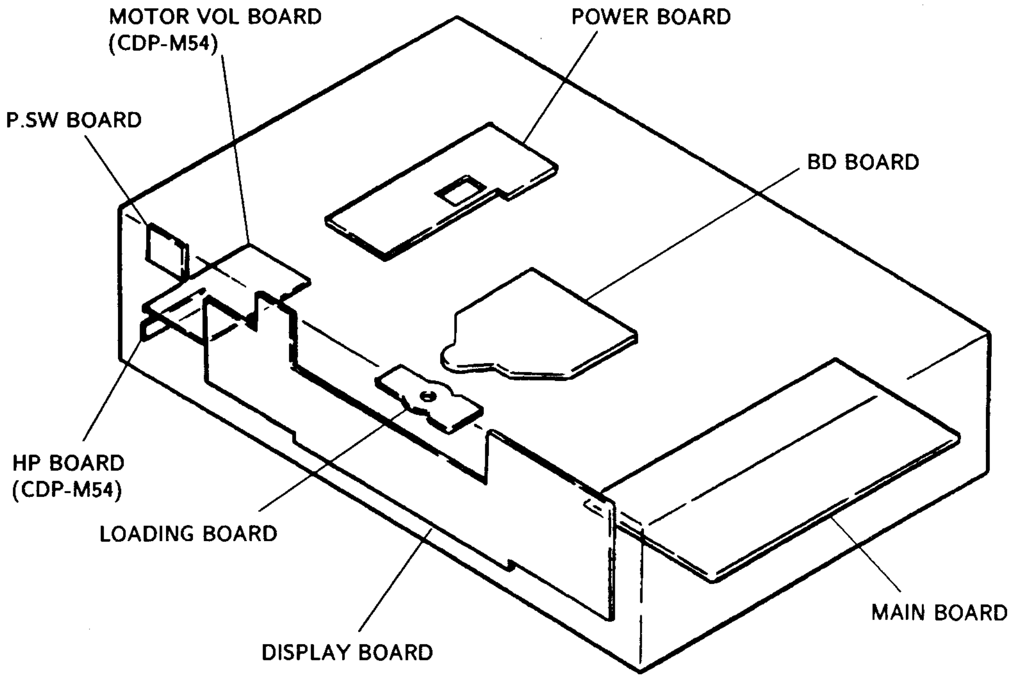
SECTION 4
DIAGRAMS

4-1 BLOCK DIAGRAM


KSS-240A
OPTICAL PICK-UP BLOCK
DETECTOR
LASER DIODE
PHOTO DIODE
FOCUS COIL
TRACKING COIL
1.4Vp-p
(PLAY)
IC101
SERVO SIGNAL PROCESSOR
APPROX 500mVp-p
APPROX 400mVp-p
2.5V
IC102
SPINDLE/SLED MOTOR DRIVE
FOCUS COIL DRIVE
TRACKING COIL DRIVE
SLED MOTOR DRIVE
SPINDLE MOTOR DRIVE
M102
SLED MOTOR
M101
SPINDLE MOTOR
S101
LIMIT SWITCH
IC301
DIGITAL SIGNAL PROCESSOR
0.6Vp-p
7.5μS
4.8Vp-p
22.5μS
5.4Vp-p
0.48μS
IC302
DIGITAL FILTER
X327
22.5792MHz
Q341
MUTING SWITCH
Q342
MUTING SWITCH
IC401
SYSTEM CONTROL
X401
4MHz
S272
LOAD IN SWITCH
S271
LOAD OUT SWITCH
FLD401
FLUORESCENT INDICATOR TUBE
S401-421, S423-425, S427, 428, 431, S432, 435, 436, S439-442
FUNCTION SWITCH
IC103
LOADING MOTOR DRIVE
M191
LOADING MOTOR
CDP-M

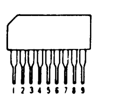

4.8Vp-p
22.5μS (PLAY)
5.4Vp-p
0.48μS (PLAY)
Q341 MUTING SWITCH
Q342 MUTING SWITCH
Q343 MUTING SWITCH
Q344 MUTING SWITCH
D344
Q372, 374, 376 L-CH MUTING
Q371, 373, 375 R-CH MUTING
IC302 DIGITAL FILTER
LRCK
DATA
BCLK
INV 0
FLGL
FLGR
STSM
DATA
CLK
PGML
IC303 D/A CONVERTER
INIT
DATAR
DATAL
LRCKO
BCLKO
MCLK
LRCK
BCK
X OUT
X IN
X327 22.5792MHz
D328
L1 (-)
L2 (+)
L1 (+)
L2 (-)
R2 (-)
R1 (+)
R2 (+)
R1 (-)
IC306, 307 AUDIO AMP
IC306 (1/2)
IC307 (1/2)
IC306 (2/2)
IC307 (2/2)
IC451 (1/2)
IC451 HEADPHONE AMP
IC451 (2/2)
J481 PHONES
VARIABLE
J381 LINE OUT
FIXED
RV451 LINE OUT PHONE LEVEL
CDP-M54
IC401 SYSTEM CONTROL
RESET
VLUP
VLDOWN
LED/BSOUT
SIRCS/BSIN
DATA
CLK
PRGL
LOD OUT
LOD IN
IC471 MOTOR DRIVE
SWITCH
MOTOR DRIVE
RV451 (MOTOR)
D471 LINE OUT PHONE LEVEL
IC402 REMOTE COMMANDER DETECTOR
+5V
CDP-M54
K0-K3
S401-421, S423-425, S427, 428, 431, S432, 435, 436, S439-442
FUNCTION SWITCH
IC103 LOADING MOTOR DRIVE
M191 LOADING MOTOR
D391
Q392 AUDIO BUS SWITCH
CN391 AU BUS
BS IN
BS OUT
CDP-M43
+7V
D207, Q207, 208 +7V REG
Q203 REG
+5V
-5V
IC202 VOLTAGE REG
CO+
+VCC
VREF
-VCC
RST
SW
EO-
Q202 REG
D205, 206 +VCC RECT
D203, 204 -VCC RECT
T901 POWER TRANSFORMER
EXCEPT E. Saudi Arabia MODEL
AC IN
E. Saudi Arabia MODEL
S201 VOLTAGE SELECTOR
220-240V
110-120V
Q206 B+ SWITCH
Q205 B+ SWITCH
Q204 B+ SWITCH
A+5V
Q209 REG
IC203 B+ SWITCH
CDP-M54
D201
D202
S491 POWER
ON
STANDBY
-30V
IC201 -32V REG
ON/OFF
OUT
IN
Q201 SWITCHING
+5V
-30V

4-2 CIRCUIT BOARDS LOCATION

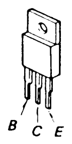

MOTOR VOL BOARD (CDP-M54)
POWER BOARD
P.SW BOARD
BD BOARD
HP BOARD (CDP-M54)
LOADING BOARD
MAIN BOARD
DISPLAY BOARD

4-3 SEMICONDUCTOR LEAD LAYOUTS

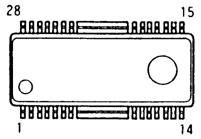
BA6208
RC4556S



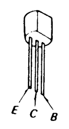
2SB1094-LK



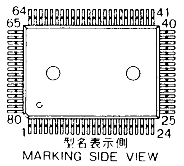
BA6297AFP



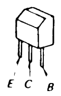
2SC1815-Y
2SC2878-AB



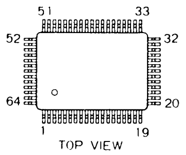
CXD2500AQ


64
65
41
40
80
25
1
24
型名表示側
MARKING SIDE VIEW

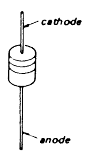
2SD774-34



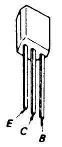
CXD2501Q


51
33
52
32
64
20
1
19
TOP VIEW

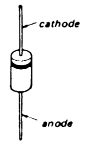
RD5.6ES-B2
RD7.5ES-B2
RD7.5JS-B2
RD9.1ES-L
11ES2


cathode
anode

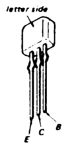
DTA144ES
DTC114ES
DTC144ES
2SC2458-YGR



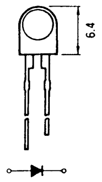
1N4148M
10E2


cathode
anode

2SA1175-HFE
2SC3623A-LK


letter side
E
C
B

BR4361F



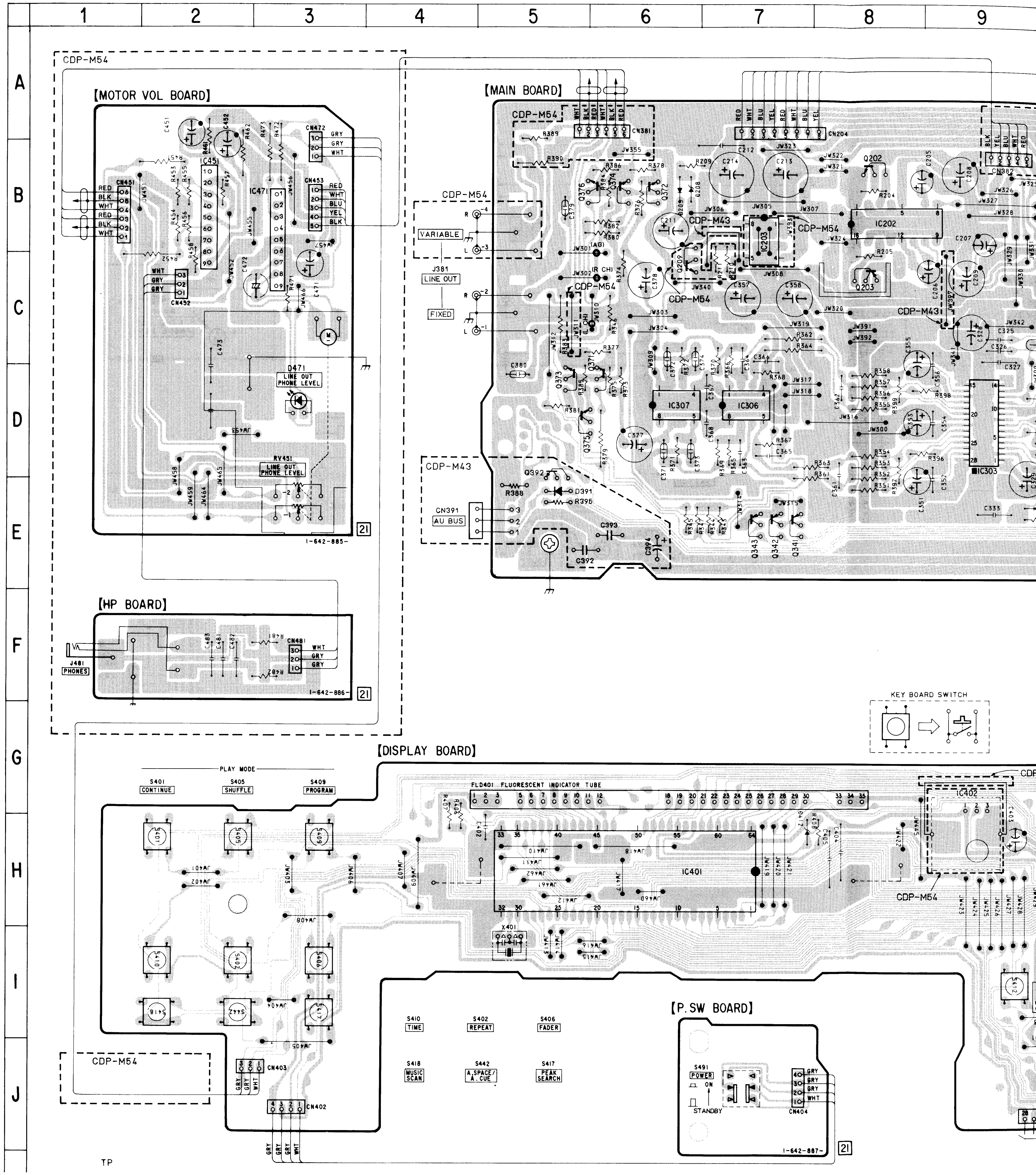
• SEMICONDUCTOR LOCATION

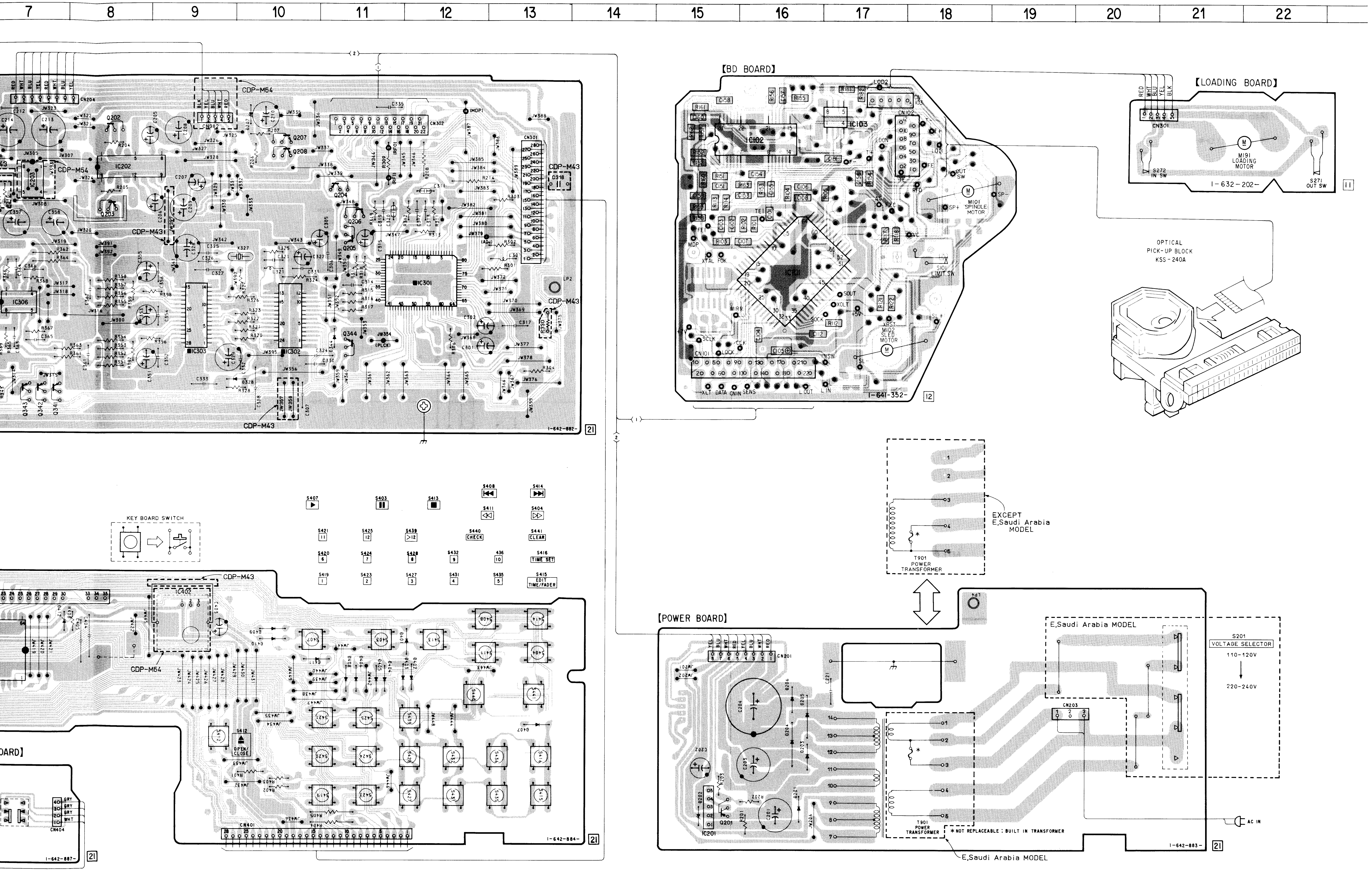
Ref. No.	Location	Ref. No.	Location
D201	J - 16	IC203	B - 7
D202	J - 15	IC301	D - 12
D203	I - 16	IC302	D - 10
D204	I - 16	IC303	D - 9
D205	I - 16	IC306	D - 7
D206	I - 16	IC307	D - 6
D207	B - 10	IC401	H - 6
D208	B - 6	IC402	G - 9
D209	B - 6	IC451	B - 2
D328	E - 10	IC471	B - 3
D344	D - 11		
D391	E - 5	Q201	J - 15
D401	H - 12	Q202	B - 8
D402	H - 12	Q203	C - 8
D403	H - 12	Q204	B - 11
D404	H - 11	Q205	C - 11
D405	H - 11	Q206	C - 11
D406	H - 11	Q207	B - 10
D407	I - 13	Q208	B - 10
D408	H - 11	Q209	C - 6
		Q341	E - 7
D409	H - 10	Q342	E - 7
D410	H - 10	Q343	E - 7
D411	H - 10	Q344	D - 11
D412	H - 7	Q371	D - 6
D471	D - 3	Q372	B - 6
IC101	C - 16	Q373	D - 5
IC102	B - 16	Q374	B - 6
IC103	B - 17	Q375	D - 5
IC201	J - 15	Q376	B - 6
IC202	B - 8	Q392	D - 5

Note :

- ○— : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- ● : Through hole.
- ▨ : Pattern on the side which is seen.
- ▨ : Pattern of the rear side.

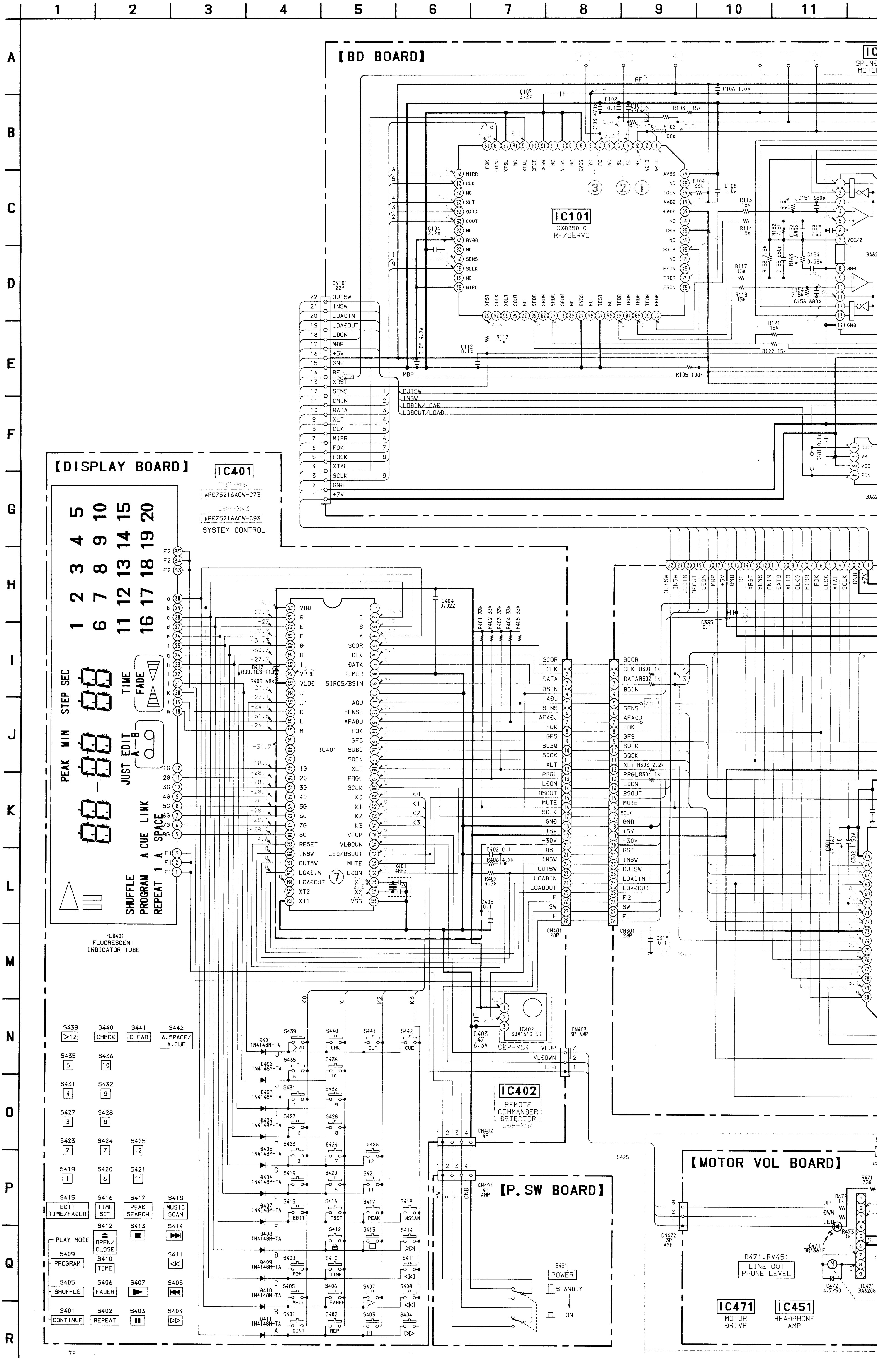
4-4 PRINTED WIRING BOARDS


1
2
3
4
5
6
7
8
9
A
B
C
D
E
F
G
H
I
J
CDP-M54
[MOTOR VOL BOARD]
[MAIN BOARD]
CDP-M43
VARIABLE
J381
LINE OUT
FIXED
D471
LINE OUT
PHONE LEVEL
RV451
LINE OUT
PHONE LEVEL
IC451
IC471
IC307
IC306
IC203
IC202
IC303
CN391
AU BUS
1-642-885-
21
[HP BOARD]
J481
PHONES
1-642-886-
KEY BOARD SWITCH
[DISPLAY BOARD]
PLAY MODE
S401
CONTINUE
S405
SHUFFLE
S409
PROGRAM
FL0401 FLUORESCENT INDICATOR TUBE
IC401
IC402
X401
S410
TIME
S402
REPEAT
S406
FADER
S418
MUSIC SCAN
S442
A.SPACE/A.CUE
S417
PEAK SEARCH
[P.SW BOARD]
S491
POWER
ON
STANDBY
CN404
1-642-887-
CN402
CN403
TP

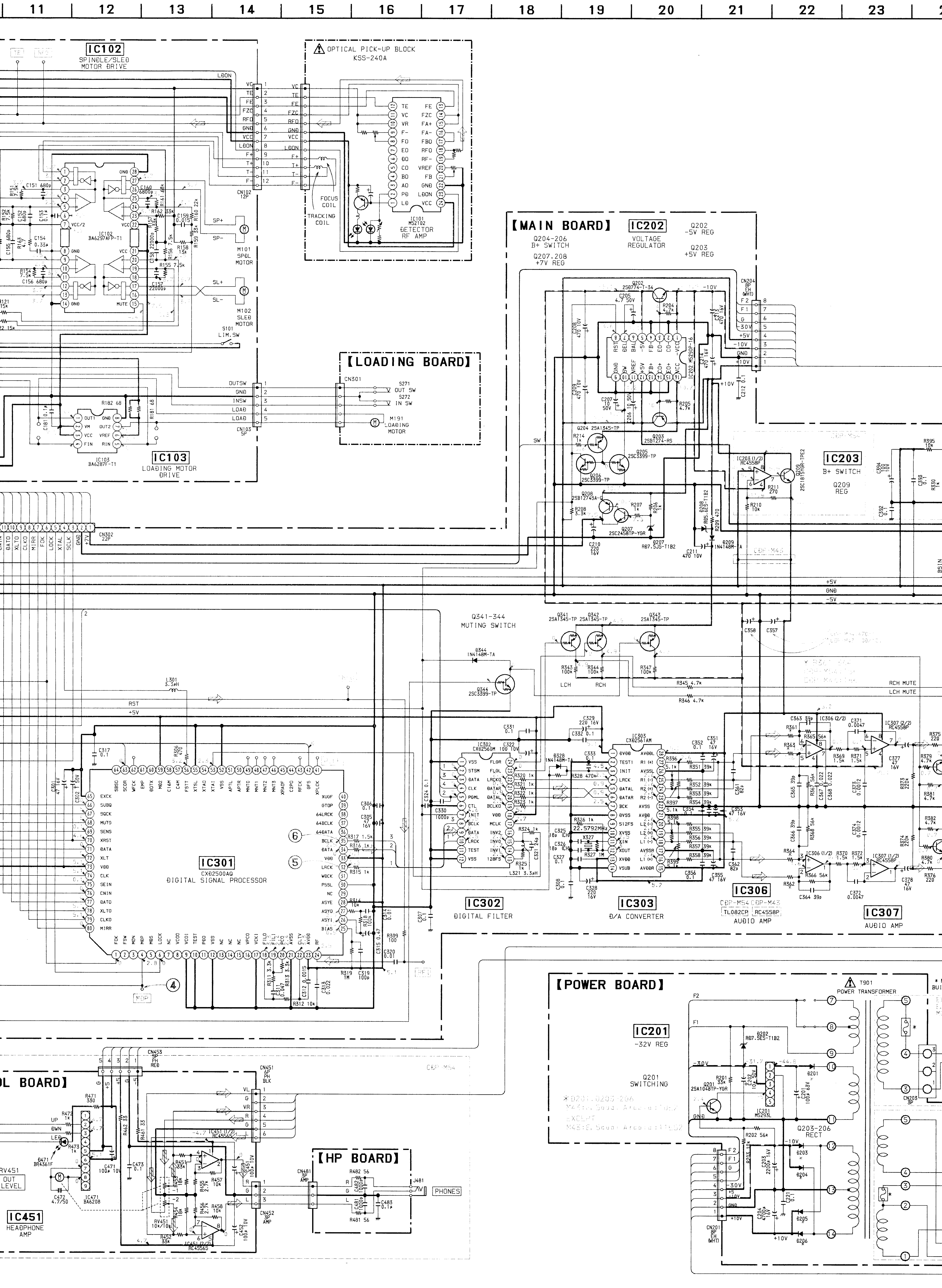

7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
CDP-M64
CDP-M43
IC202
IC301
IC302
IC303
IC306
CN204
CN301
CN302
1-642-882-
21
KEY BOARD SWITCH
S407
S403
S413
S408
S414
S411
S404
S421
S425
S439
S440 CHECK
S441 CLEAR
S420
S424
S428
S432
436
S416 TIME SET
S419
S423
S427
S431
S435
S415 EDIT TIME/FADER
IC402
S412 OPEN/CLOSE
CN401
1-642-884-
CN404
GRY
GRY
GRY
WHT
1-642-887-
【BD BOARD】
IC101
IC102
IC103
CN101
CN102
M101 SPINDLE MOTOR
M102 SLED MOTOR
S101 LIMIT SW
XLT DATA CNIN SENS
L OUT
L IN
1-641-352-
12
【LOADING BOARD】
RED WHT BLU YEL BLK
CN301
M191 LOADING MOTOR
S272 IN SW
S271 OUT SW
1-632-202-
11
OPTICAL PICK-UP BLOCK
KSS-240A
EXCEPT E,Saudi Arabia MODEL
T901 POWER TRANSFORMER
【POWER BOARD】
CN201
YEL BLU WHT RED YEL BLU WHT RED
IC201
C204
C203
C201
E,Saudi Arabia MODEL
S201 VOLTAGE SELECTOR
110-120V
220-240V
CN203
AC IN
T901 POWER TRANSFORMER
* NOT REPLACEABLE : BUILT IN TRANSFORMER
1-642-883-
21
E,Saudi Arabia MODEL

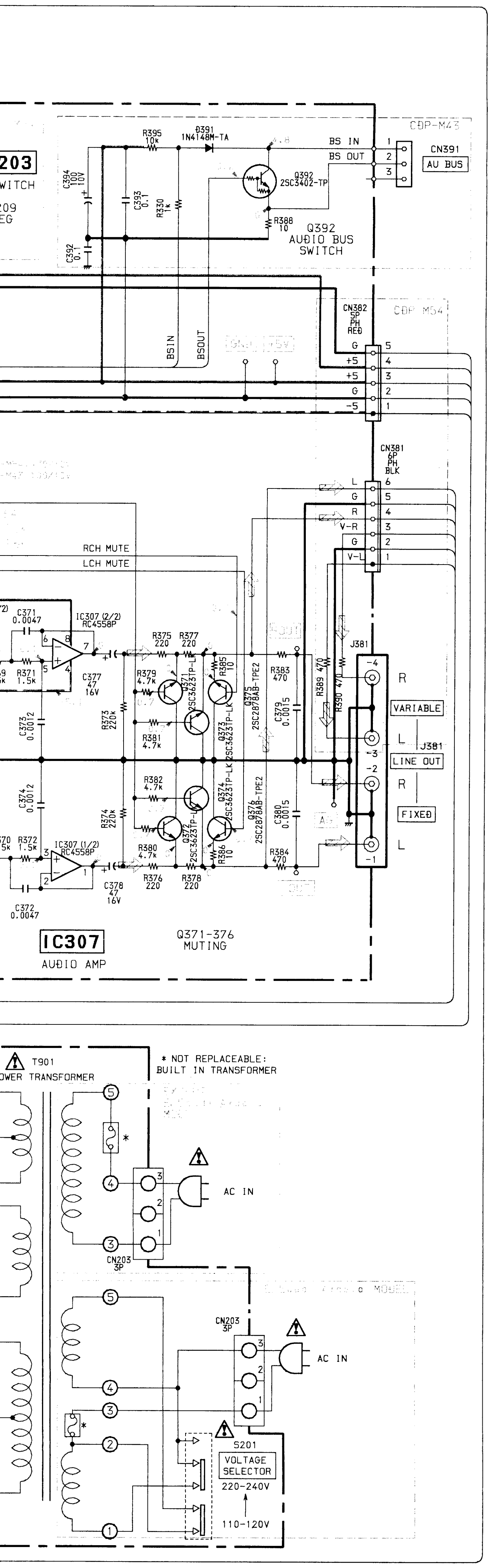
4-5 SCHEMATIC DIAGRAM

• Refer to Page 20 for IC Block Diagrams.



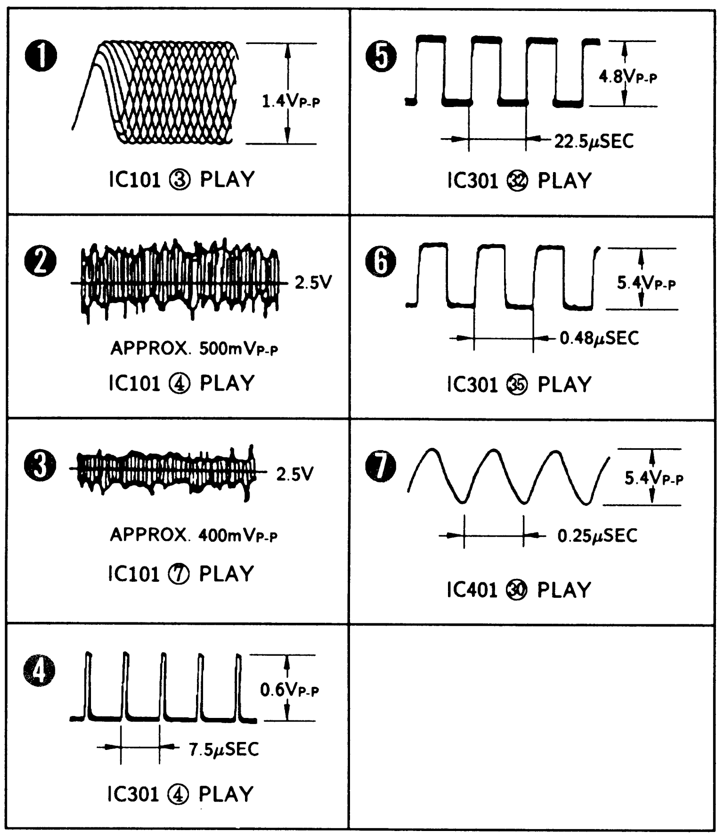
1
2
3
4
5
6
7
8
9
10
11
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
【BD BOARD】
IC101
CXD2501Q
RF/SERVO
CN101
22P
OUTSW
INSW
LOADIN
LOADOUT
LDON
MDP
+5V
GND
RF
XRST
SENS
CNIN
DATA
XLT
CLK
MIRR
FOK
LOCK
XTAL
SCLK
+7V
【DISPLAY BOARD】
IC401
μPD75216ACW-C73
μPD75216ACW-C93
SYSTEM CONTROL
FLD401
FLUORESCENT
INDICATOR TUBE
SHUFFLE
PROGRAM
REPEAT 1 A
A CUE
SPACE
LINK
JUST EDIT
A—B
PEAK MIN STEP SEC
TIME
FADE
CN401
28P
CN301
28P
IC402
SBX1610-59
REMOTE
COMMANDER
DETECTOR
C403
47
6.3V
CN403
3P AMP
VLUP
VLDOWN
LED
CN402
4P
CN404
4P
AMP
【P.SW BOARD】
S491
POWER
STANDBY
ON
【MOTOR VOL BOARD】
CN472
3P
AMP
D471,RV451
LINE OUT
PHONE LEVEL
IC471
MOTOR
DRIVE
IC451
HEADPHONE
AMP
D471
BR4361F
C472
4.7/50
S439
>12
S440
CHECK
S441
CLEAR
S442
A.SPACE/
A.CUE
S435
S436
S431
S432
S427
S428
S423
S424
S425
S419
S420
S421
S415
EDIT
TIME/FADER
S416
TIME
SET
S417
PEAK
SEARCH
S418
MUSIC
SCAN
S412
OPEN/
CLOSE
S413
S414
PLAY MODE
S409
PROGRAM
S410
TIME
S411
S405
SHUFFLE
S406
FADER
S407
S408
S401
CONTINUE
S402
REPEAT
S403
S404
D401–D411
1N4148M-TA
K0
K1
K2
K3
X401
4MHz
SPINDLE
MOTOR
TP


11
12
13
14
15
16
17
18
19
20
21
22
23
IC102
SPINDLE/SLED MOTOR DRIVE
OPTICAL PICK-UP BLOCK
KSS-240A
FOCUS COIL
TRACKING COIL
IC101
M52102
DETECTOR
RF AMP
IC102
BA6297AFP-T1
M101
SPDL MOTOR
M102
SLED MOTOR
S101
LIM. SW
CN102
12P
【LOADING BOARD】
CN301
S271
OUT SW
S272
IN SW
M191
LOADING MOTOR
IC103
BA6287F-T1
IC103
LOADING MOTOR DRIVE
CN103
5P
【MAIN BOARD】
IC202
VOLTAGE REGULATOR
Q204-206
B+ SWITCH
Q207.208
+7V REG
Q202
-5V REG
Q203
+5V REG
CN204
8P
IC203
B+ SWITCH
Q209
REG
CN302
22P
Q341-344
MUTING SWITCH
LCH
RCH
RCH MUTE
LCH MUTE
IC301
CXD2500AQ
DIGITAL SIGNAL PROCESSOR
IC302
CXD2560M
IC302
DIGITAL FILTER
IC303
CXD2561AM
IC303
D/A CONVERTER
X327
22.5792MHz
IC306
CDP-M54 TL082CP
CDP-M43 RC4558P
AUDIO AMP
IC307
AUDIO AMP
【POWER BOARD】
T901
POWER TRANSFORMER
IC201
-32V REG
Q201
SWITCHING
Q203-206
RECT
IC201
M5293L
CN201
8P
CN203
3P
CN453
5P
L BOARD】
CN451
6P
IC471
BA6208
RV451
OUT LEVEL
IC451
HEADPHONE AMP
【HP BOARD】
CN481
3P
J481
PHONES
CN452
3P



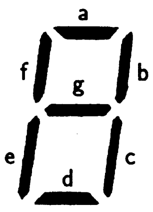
CDP-M43
R395 10k
D391 1N4148M-TA
BS IN
BS OUT
CN391
AU BUS
Q392 2SC3402-TP
C394 100 10V
C393 0.1
R330 1k
R388 10
Q392 AUDIO BUS SWITCH
C392 0.1
203
SWITCH
209
EG
CN382 5P PH RED
CDP M54
BSIN
BSOUT
G
+5
+5
G
-5
CN381 6P PH BLK
L
G
R
V-R
G
V-L
RCH MUTE
LCH MUTE
C371 0.0047
IC307 (2/2) RC4558P
R375 220
R377 220
R385 10
R379 4.7k
Q371 2SC3623TP-LK
Q373 2SC3623TP-LK
Q375 2SC2878AB-TPE2
R383 470
R389 470
R390 470
J381
C377 47 16V
R371 1.5k
C373 0.0012
R373 220k
R381 4.7k
C379 0.0015
VARIABLE
LINE OUT
FIXED
C374 0.0012
R374 220k
R382 4.7k
Q374 2SC3623TP-LK
Q372 2SC3623TP-LK
Q376 2SC2878AB-TPE2
R386 10
C380 0.0015
R384 470
R372 1.5k
IC307 (1/2) RC4558P
R380 4.7k
R376 220
R378 220
C378 47 16V
C372 0.0047
IC307
AUDIO AMP
Q371-376 MUTING
T901
POWER TRANSFORMER
* NOT REPLACEABLE: BUILT IN TRANSFORMER
AC IN
CN203 3P
S201
VOLTAGE SELECTOR
220-240V
110-120V

WAVEFORMS



❶
1.4Vp-p
IC101 ③ PLAY
❷
2.5V
APPROX. 500mVp-p
IC101 ④ PLAY
❸
2.5V
APPROX. 400mVp-p
IC101 ⑦ PLAY
❹
0.6Vp-p
7.5μSEC
IC301 ④ PLAY
❺
4.8Vp-p
22.5μSEC
IC301 ㉜ PLAY
❻
5.4Vp-p
0.48μSEC
IC301 ㉟ PLAY
❼
5.4Vp-p
0.25μSEC
IC401 ㉚ PLAY

FLD401

	8G	7G	6G	5G	4G	3G	2G	1G
a							1	3
b							2	4
c								5
d							6	8
e							7	9
f								10
g								
h	▶		PEAK	MIN	STEP	SEC	11	13
i	❚❚		–	•			12	14
j	SHUFFLE		JUST	EDIT		TIME		15
k	PROGRAM		A. CUE	A		▮▮▮►	16	18
l	REPEAT		LINK	B		◄▮▮▮	17	19
m	1		A. SPACE	🖭		FADE		20

Note :

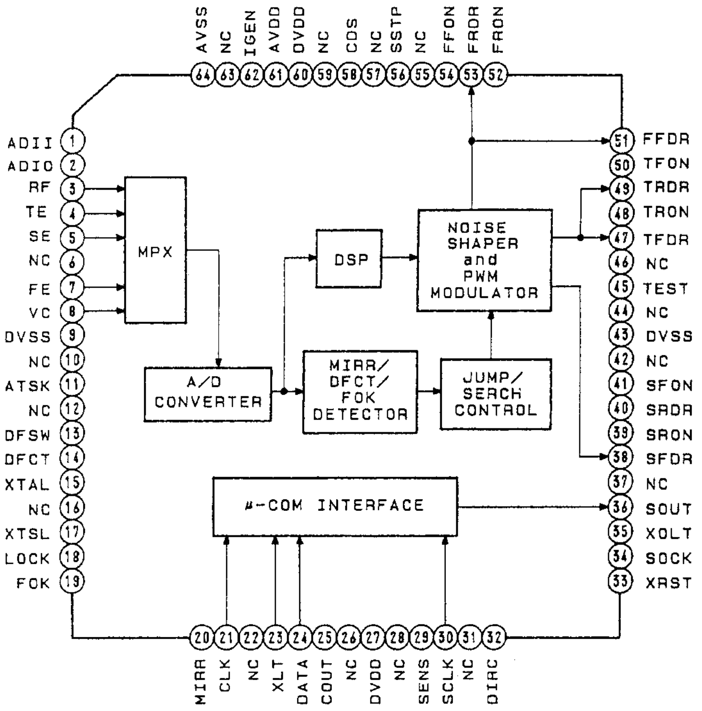
- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- △ : internal component.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

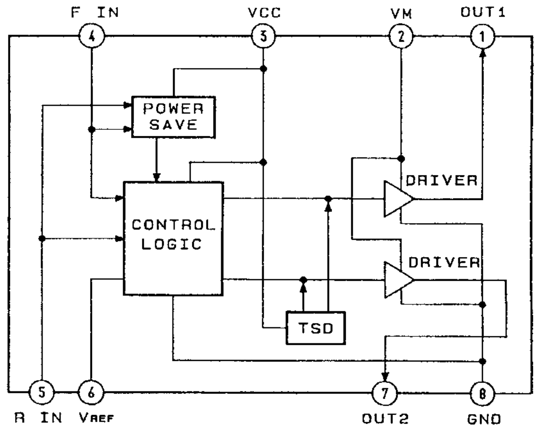
- ▬▬ : B + Line
- ▬ ▬ ▬ : B − Line
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- no mark : STOP
- Voltages are taken with a VOM (Input impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD

4-6 IC BLOCK DIAGRAM

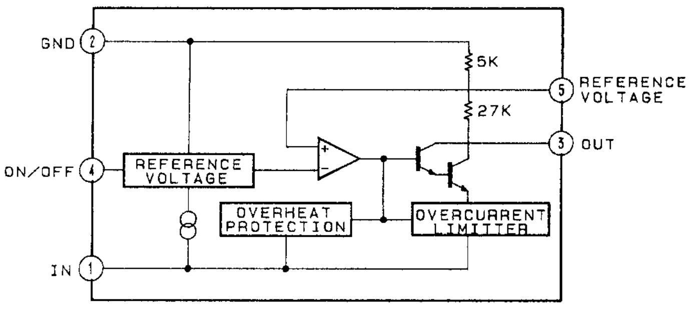
IC101 CXD2501


AVSS 64
NC 63
IGEN 62
AVDD 61
DVDD 60
NC 59
CDS 58
NC 57
SSTP 56
NC 55
FFON 54
FRDR 53
FRON 52
ADII 1
ADIO 2
RF 3
TE 4
SE 5
NC 6
FE 7
VC 8
DVSS 9
NC 10
ATSK 11
NC 12
DFSW 13
DFCT 14
XTAL 15
NC 16
XTSL 17
LOCK 18
FOK 19
MPX
A/D CONVERTER
DSP
NOISE SHAPER and PWM MODULATOR
MIRR/ DFCT/ FOK DETECTOR
JUMP/ SERCH CONTROL
µ-COM INTERFACE
51 FFDR
50 TFON
49 TRDR
48 TRON
47 TFDR
46 NC
45 TEST
44 NC
43 DVSS
42 NC
41 SFON
40 SRDR
39 SRON
38 SFDR
37 NC
36 SOUT
35 XOLT
34 SOCK
33 XRST
20 MIRR
21 CLK
22 NC
23 XLT
24 DATA
25 COUT
26 NC
27 DVDD
28 NC
29 SENS
30 SCLK
31 NC
32 DIRC

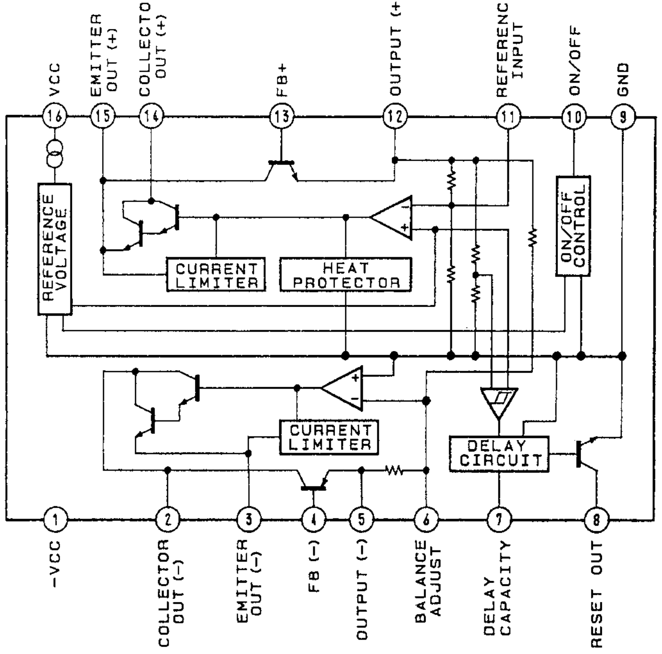
IC103 BA6287F


F IN 4
VCC 3
VM 2
OUT1 1
POWER SAVE
CONTROL LOGIC
DRIVER
DRIVER
TSD
R IN 5
VREF 6
OUT2 7
GND 8

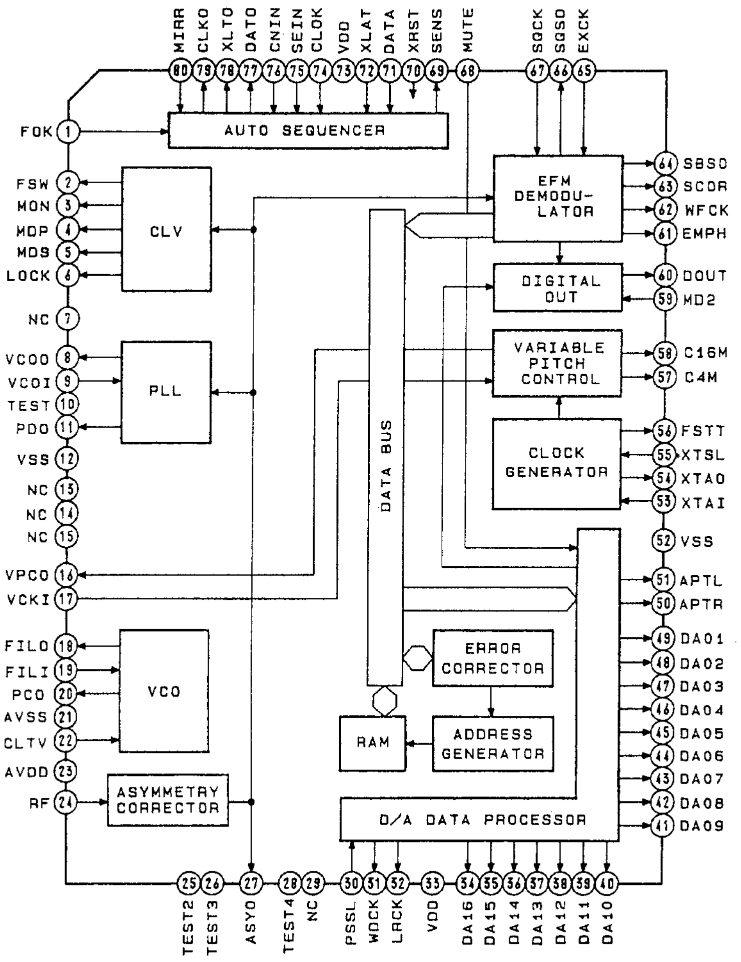
IC201 M5293L


GND 2
5K
27K
5 REFERENCE VOLTAGE
3 OUT
ON/OFF 4
REFERENCE VOLTAGE
OVERHEAT PROTECTION
OVERCURRENT LIMITTER
IN 1

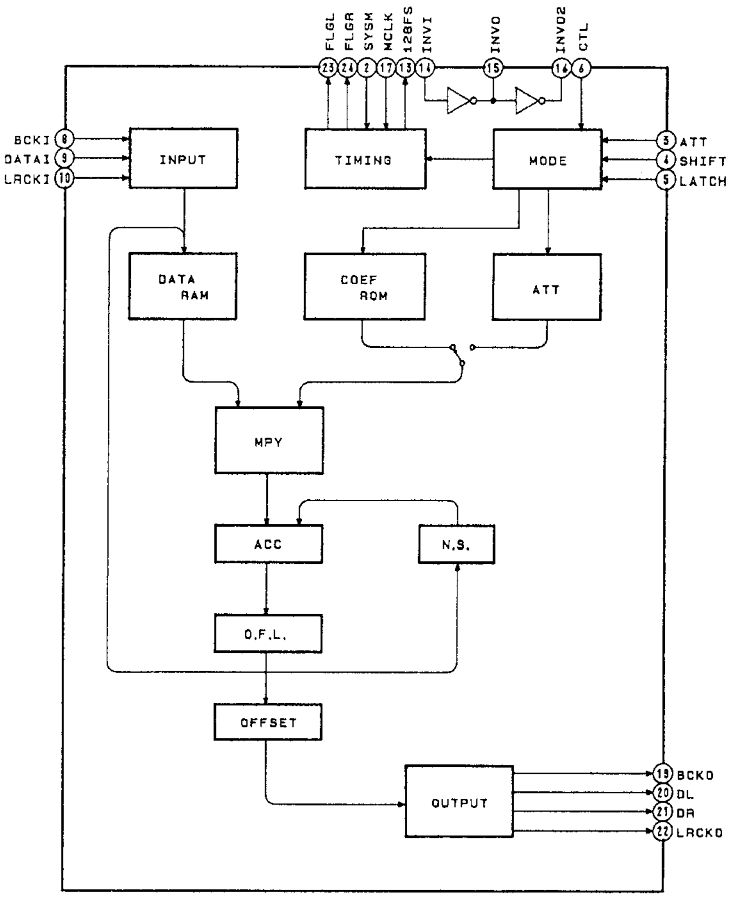
IC202 M5290P-16


VCC 16
EMITTER OUT (+) 15
COLLECTOR OUT (+) 14
FB+ 13
OUTPUT (+S) 12
REFERENCE INPUT 11
ON/OFF 10
GND 9
REFERENCE VOLTAGE
CURRENT LIMITER
HEAT PROTECTOR
ON/OFF CONTROL
CURRENT LIMITER
DELAY CIRCUIT
1 -VCC
2 COLLECTOR OUT (-)
3 EMITTER OUT (-)
4 FB (-)
5 OUTPUT (-)
6 BALANCE ADJUST
7 DELAY CAPACITY
8 RESET OUT

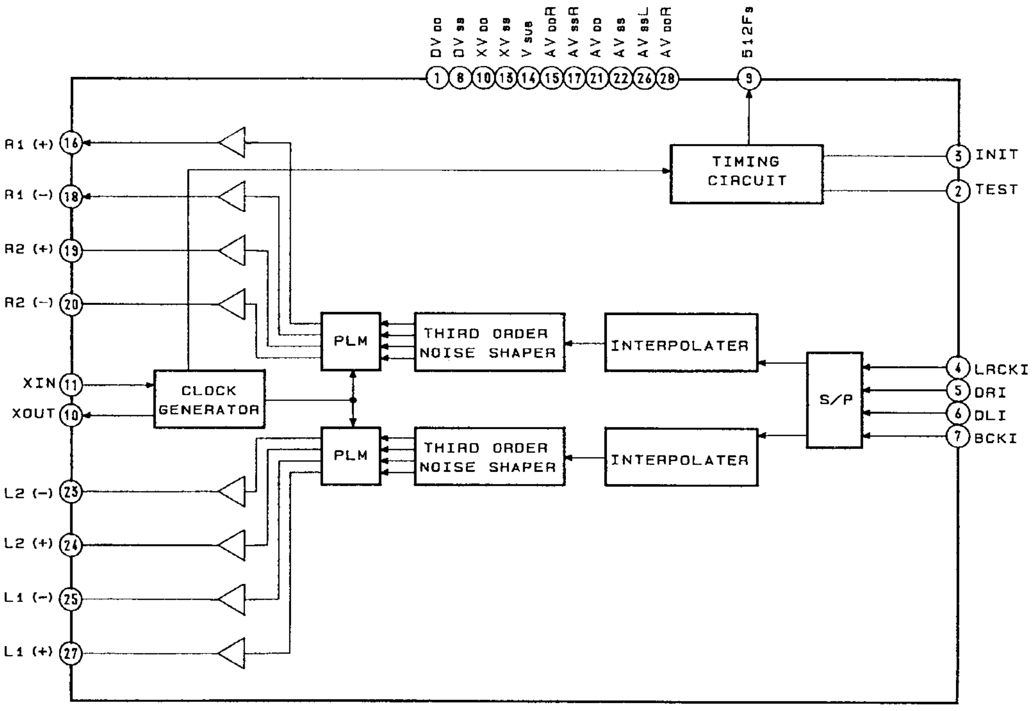
IC301 CXD2500AQ

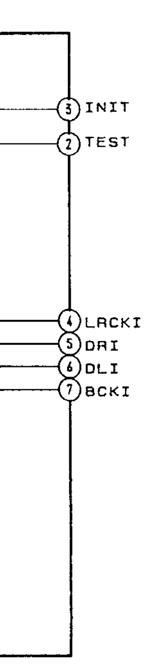

MIRR 80
CLKO 79
XLTO 78
DATO 77
CNIN 76
SEIN 75
CLOK 74
VDD 73
XLAT 72
DATA 71
XRST 70
SENS 69
MUTE 68
SQCK 67
SQSO 66
EXCK 65
FOK 1
AUTO SEQUENCER
FSW 2
MON 3
MDP 4
MDS 5
LOCK 6
CLV
NC 7
VCOO 8
VCOI 9
TEST 10
PDO 11
PLL
VSS 12
NC 13
NC 14
NC 15
VPCO 16
VCKI 17
FILO 18
FILI 19
PCO 20
AVSS 21
CLTV 22
AVDD 23
RF 24
VCO
ASYMMETRY CORRECTOR
DATA BUS
EFM DEMODU-LATOR
DIGITAL OUT
VARIABLE PITCH CONTROL
CLOCK GENERATOR
ERROR CORRECTOR
RAM
ADDRESS GENERATOR
D/A DATA PROCESSOR
64 SBSO
63 SCOR
62 WFCK
61 EMPH
60 DOUT
59 MD2
58 C16M
57 C4M
56 FSTT
55 XTSL
54 XTAO
53 XTAI
52 VSS
51 APTL
50 APTR
49 DA01
48 DA02
47 DA03
46 DA04
45 DA05
44 DA06
43 DA07
42 DA08
41 DA09
25 TEST2
26 TEST3
27 ASYO
28 TEST4
29 NC
30 PSSL
31 WDCK
32 LRCK
33 VDD
34 DA16
35 DA15
36 DA14
37 DA13
38 DA12
39 DA11
40 DA10

IC302 CXD2560M


FLGL 23
FLGR 24
SYSM 2
MCLK 17
128FS 13
INVI 14
INVO 15
INVO2 16
CTL 6
BCKI 8
DATAI 9
LRCKI 10
INPUT
TIMING
MODE
3 ATT
4 SHIFT
5 LATCH
DATA RAM
COEF ROM
ATT
MPY
ACC
N.S.
O.F.L.
OFFSET
OUTPUT
19 BCKO
20 DL
21 DR
22 LRCKO

IC303 CXD2561AM


DVDD 1
DVSS 8
XVDD 10
XVSS 13
VSUB 14
AVDDR 15
AVSSR 17
AVDD 21
AVSS 22
AVSSL 26
AVDDR 28
512Fs 9
TIMING CIRCUIT
3 INIT
2 TEST
R1 (+) 16
R1 (-) 18
R2 (+) 19
R2 (-) 20
XIN 11
XOUT 10
CLOCK GENERATOR
PLM
THIRD ORDER NOISE SHAPER
INTERPOLATER
PLM
THIRD ORDER NOISE SHAPER
INTERPOLATER
S/P
4 LRCKI
5 DRI
6 DLI
7 BCKI
L2 (-) 23
L2 (+) 24
L1 (-) 25
L1 (+) 27



3 INIT
2 TEST
4 LRCKI
5 DRI
6 DLI
7 BCKI

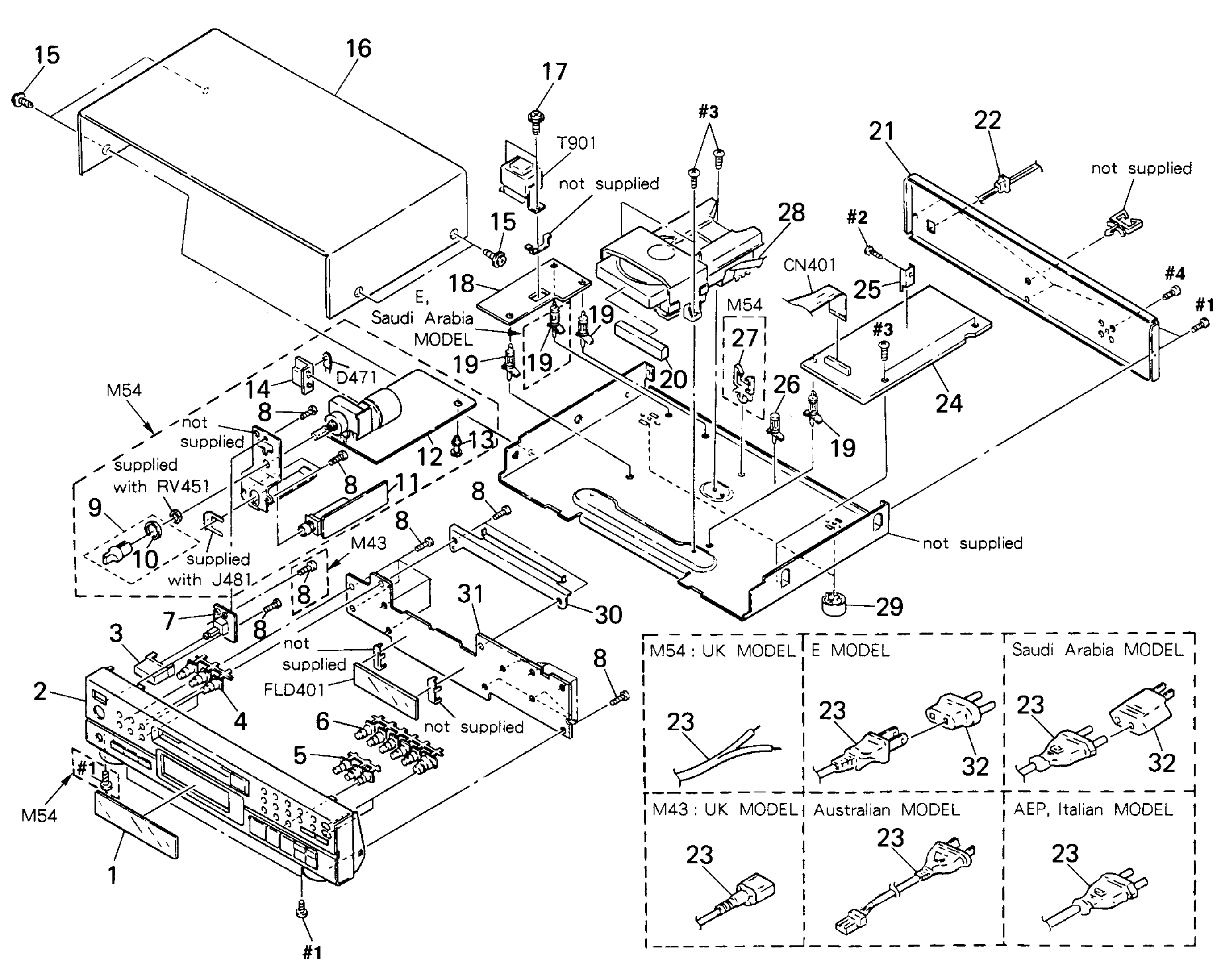
SECTION 5
EXPLODED VIEWS

NOTE:
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Color indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE) .... (RED)
  ↑ Parts color ↑ Cabinet's color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board.

5-1 CABINET SECTION

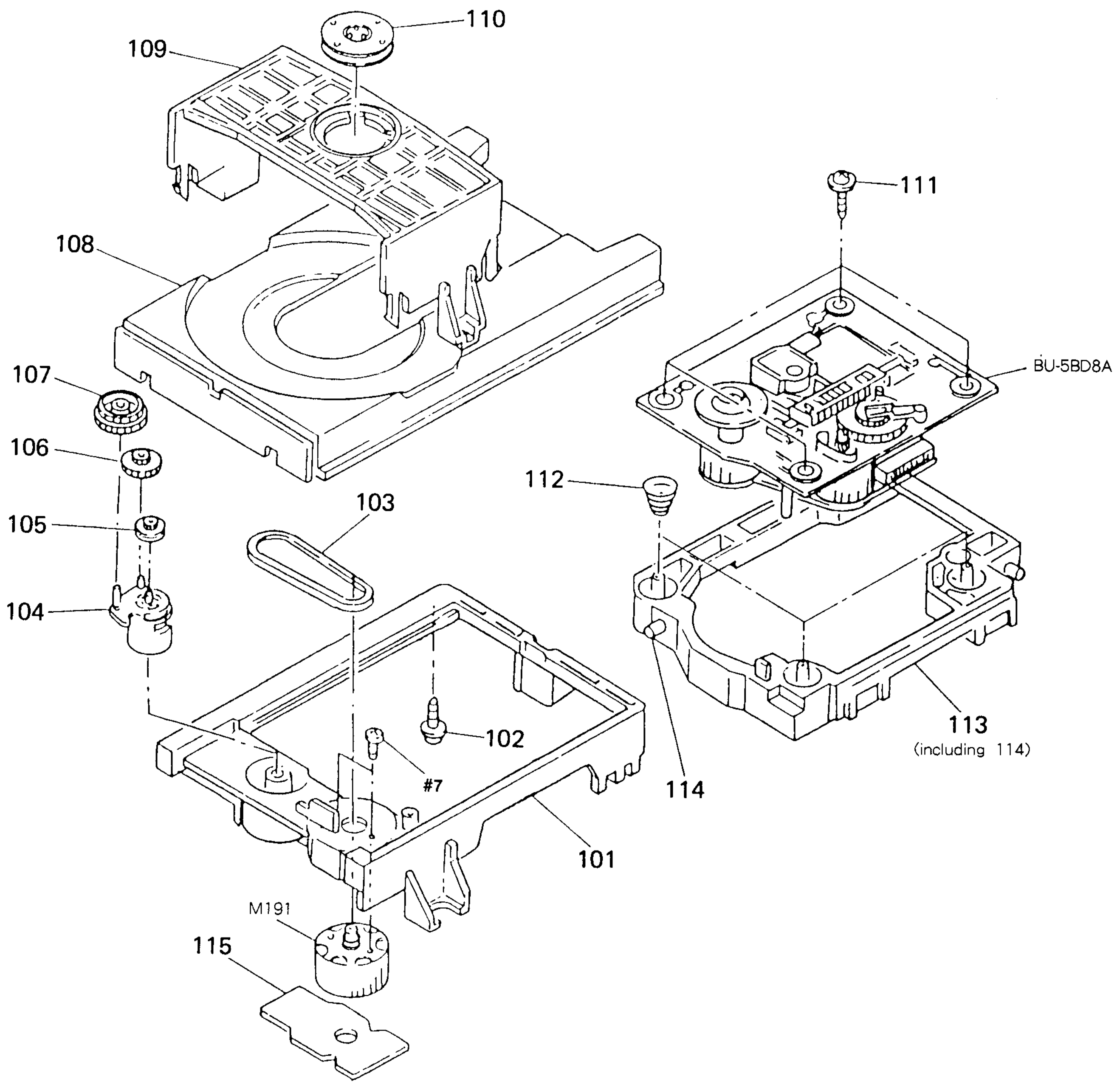


15
16
17
T901
not supplied
#3
21
22
not supplied
15
28
#2
CN401
18
E, Saudi Arabia MODEL
19
19
19
M54
27
25
#3
#4
#1
20
26
24
M54
14
D471
not supplied
8
12
13
19
supplied with RV451
9
10
supplied with J481
M43
8
11
8
8
8
not supplied
7
8
3
31
30
29
not supplied
FLD401
not supplied
2
4
6
5
8
#1
M54
1
#1
M54 : UK MODEL
23
E MODEL
23
32
Saudi Arabia MODEL
23
32
M43 : UK MODEL
23
Australian MODEL
23
AEP, Italian MODEL
23

Ref. No.	Part No.	Description
1	4-950-182-01	PLATE, INDICATION (M54
1	4-950-182-11	PLATE, INDICATION (M43
2	X-4942-345-1	PANEL ASSY, FRONT (BLA
2	X-4942-346-1	PANEL ASSY, FRONT (GRAY) (EXCEPT
2	X-4942-347-1	PANEL ASSY, FRONT (BLA
3	4-950-176-01	BUTTON (POWER) (GRAY) (EXCEPT M54
3	4-950-176-11	BUTTON (POWER) (BLACK)
4	4-950-177-01	BUTTON (G) (GRAY) (EXCEPT M54,
4	4-950-177-11	BUTTON (G) (BLACK) (M54,
5	4-950-179-01	BUTTON (MC/B) (GRAY) (EXCEPT M54,
5	4-950-179-11	BUTTON (MC/B) (BLACK) (
6	4-950-178-01	BUTTON (MC/A) (GRAY) (EXCEPT M54,
6	4-950-178-11	BUTTON (MC/A) (BLACK) (
* 7	1-642-887-21	P. SW BOARD
8	4-928-635-01	SCREW, +BV (2. 6X8) TA
9	A-4604-901-A	KNOB (HP) ASSY (M54)
10	4-948-469-01	SPRING, RING (M54)
11	1-642-886-21	HP BOARD (M54)
* 12	A-4649-107-A	MOTOR VOL BOARD, COMP
* 13	3-676-567-00	SPACER (M54:E, AEP)
* 14	4-922-980-01	HOLDER (LED) (M54)
15	3-363-099-01	SCREW (CASE +3X8 TP2)
15	3-704-366-01	SCREW (CASE) (M3X8) (MA
16	4-919-376-31	CASE (BLACK) (M54/M43:
16	4-919-376-81	CASE (GRAY) (EXCEPT M5
17	4-886-821-11	SCREW, S TIGHT, +PTTW
* 18	1-642-883-21	POWER BOARD
* 19	4-924-098-31	HOLDER, PC BOARD
20	4-950-174-01	PANEL, LOADING (GRAY) (EXCEPT M5
20	4-950-174-11	PANEL, LOADING (BLACK
20	4-950-174-21	PANEL, LOADING (BLACK

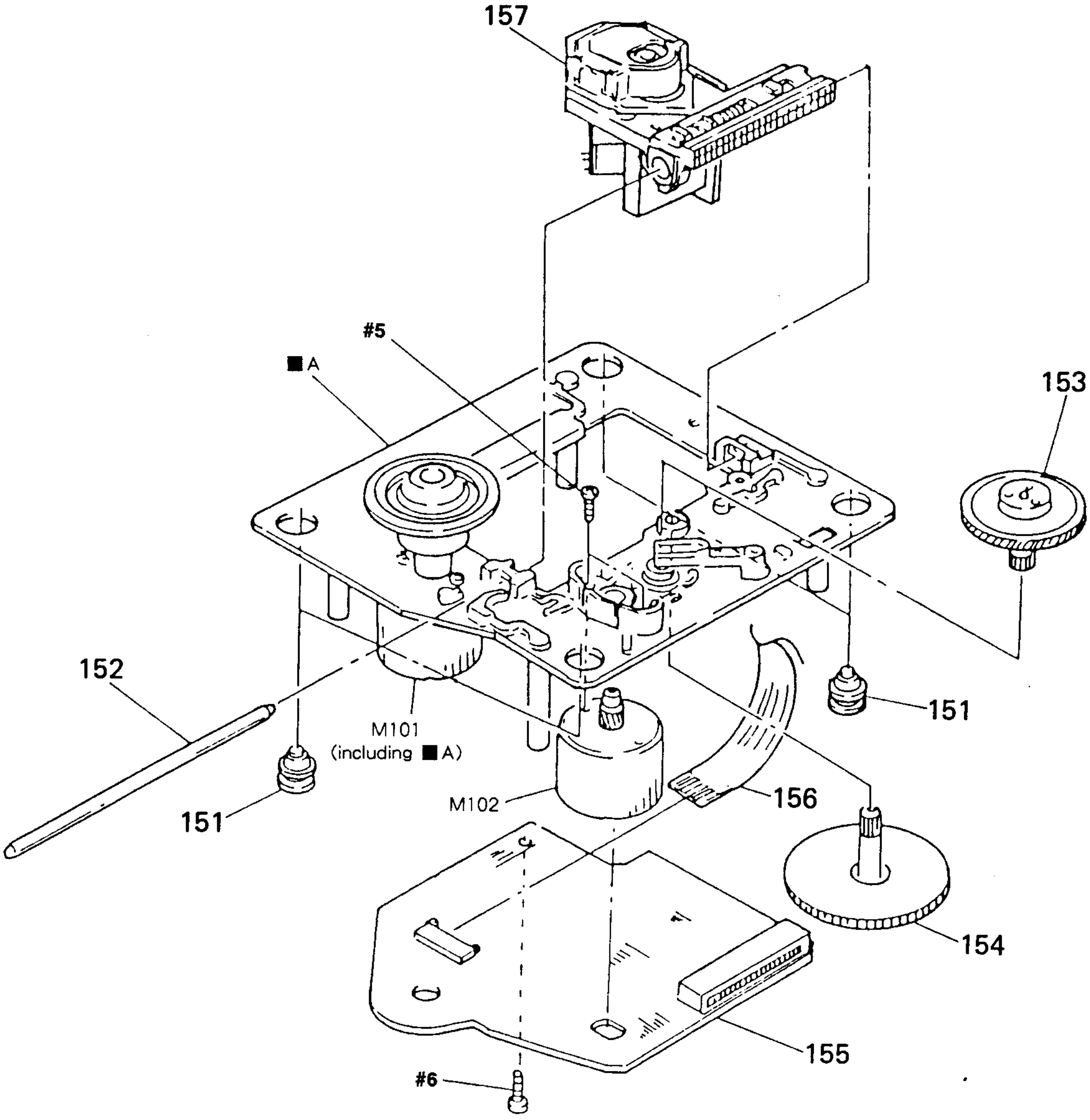
Ref. No.	Part No.	Description	Remark
* 21	4-941-467-11	PANEL (ALSACE), BACK (MADE IN FRANCE M43:AEP, Italian, UK)	
21	4-941-552-21	PANEL (ALSACE), BACK (MADE IN JAPAN M54:AEP, UK)	
* 21	4-949-433-01	PANEL, BACK (MADE IN JAPAN M54:AEP)	
* 21	4-949-433-22	PANEL, BACK (M54:E)	
* 21	4-949-433-41	PANEL, BACK (MADE IN FRANCE M43:AEP)	
* 21	4-949-433-51	PANEL, BACK (M43:E, Saudi Arabia)	
* 21	4-949-433-61	PANEL, BACK (M43:Australian)	
* 22	3-703-244-00	BUSHING (2104), CORD (EXCEPT E)	
* 22	3-703-571-11	BUSHING (S) (4516), CORD (E)	
⚠23	1-558-946-21	CORD, POWER (M54:UK)	
⚠23	1-574-358-31	CORD, POWER (WITH CONNECTOR) (Australian)	
⚠23	1-575-651-21	CORD, POWER (AEP, Italian, Saudi Arabia)	
⚠23	1-575-653-21	CORD, POWER (E)	
⚠23	1-590-379-11	CORD, POWER (M43:UK)	
* 24	A-4649-105-A	MAIN BOARD, COMPLETE (M54)	
* 24	A-4649-111-A	MAIN BOARD, COMPLETE (M43)	
* 25	4-941-237-01	HEAT SINK (M54:UK)	
25	4-902-345-01	HEAT SINK (EXCEPT M54:UK)	
* 26	3-349-025-41	HOLDER, PC BOARD	
* 27	4-314-320-00	HOLDER, WIRE (M54)	
28	1-575-160-11	WIRE, FLAT TYPE (22 CORE)	
29	4-931-169-01	FOOT	
30	4-950-180-01	REINFORCEMENT (MD)	
* 31	A-4649-104-A	DISP BOARD, COMPLETE (M54)	
* 31	A-4649-110-A	DISP BOARD, COMPLETE (M43)	
⚠32	1-569-007-11	ADAPTER, CONVERSION 2P (E)	
⚠32	1-569-008-11	ADAPTER, CONVERSION 2P (Saudi Arabia)	
CN401	1-535-987-11	JAMPER, FILM (WITH TERMINAL)	
D471	8-719-970-49	DIODE BR4361F (M54)	
⚠T901	1-449-922-11	TRANSFORMER, POWER (EXCEPT E, Saudi Arabia)	
⚠T901	1-449-923-11	TRANSFORMER, POWER (E, Saudi Arabia)	

5-2 MD SECTION (CDM14-5BD8A)



Ref. No.	Part No.	Description	Remark
101	4-933-111-01	CHASSIS (MD) (MADE IN JAPAN)	
101	4-933-111-11	CHASSIS (MD) (MADE IN FRANCE)	
* 102	4-917-583-21	BRACKET, YOKE	
103	4-927-649-01	BELT	
104	4-933-109-01	CAM	
105	4-927-651-01	PULLEY (S)	
106	4-927-628-01	GEAR (C)	
107	4-933-107-01	GEAR (PL)	
108	4-948-894-01	TABLE (ALS), DISK (MADE IN FRANCE)	
108	4-949-336-01	TABLE, DISK (MADE IN JAPAN)	
109	4-933-110-01	HOLDER (MG)	
* 110	1-452-538-11	MAGNET	
111	4-933-134-01	SCREW (+PTPWH M2.6X6)	
112	4-917-541-01	SPRING (B) (MADE IN FRANCE)	
112	4-948-503-01	SPRING (BU), COMPRESSION (MADE IN JAPAN)	
113	4-933-129-01	HOLDER (BU)	
114	4-933-108-01	SHAFT (CAM)	
* 115	1-632-202-11	LOADING BOARD	
M191	A-4604-363-A	MOTOR (L) ASSY	

5-3 OPTICAL PICK-UP BLOCK (BU-55BD8A)


157
#5
■A
153
152
151
M101
(including ■A)
151
M102
156
154
155
#6

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
151	4-933-126-01	INSULATOR (A)	
152	4-917-565-01	SHAFT, SLED	
153	4-917-567-01	GEAR (M)	
154	4-917-564-01	GEAR (P), FLATNESS	
* 155	A-4617-977-A	BD BOARD, COMPLETE	
156	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
⚠157	8-848-144-11	DEVICE, OPTICAL KSS-240A	
M101	X-4917-523-3	BASE (OUTSERT) ASSY	
M102	X-4917-504-1	MOTOR ASSY	

BD

SECTION 6
ELECTRICAL PARTS LIST

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal oxide-film resistor
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA....: μA...., uPA....: μPA....
  uPB....: μPB...., uPC....: μPC....
  uPD....: μPD....
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
*	A-4617-977-A	BD BOARD, COMPLETE			
		******************			
		< CAPACITOR >			
C101	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C102	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C103	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C104	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C105	1-135-155-21	TANTALUM CHIP	4.7uF	10%	16V
C106	1-164-346-11	CERAMIC CHIP	1uF		16V
C107	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C108	1-164-346-11	CERAMIC CHIP	1uF		16V
C112	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C151	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C152	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C153	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C154	1-164-336-11	CERAMIC CHIP	0.33uF		25V
C155	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C156	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C157	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C158	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C159	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C160	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C181	1-163-038-00	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
CN101	1-568-796-11	SOCKET, CONNECTOR 22P			
CN102	1-568-795-11	SOCKET, CONNECTOR 12P			
CN103	1-564-721-11	PIN, CONNECTOR (SMALL TYPE) 5P			
		< IC >			
IC101	8-752-344-48	IC	CXD2501Q		
IC102	8-759-071-80	IC	BA6297AFP		
IC103	8-759-040-83	IC	BA6287F		

Ref. No.	Part No.	Description			Remark
		< RESISTOR >			
R101	1-216-077-00	METAL CHIP	15K	5%	1/10W
R102	1-216-097-00	METAL CHIP	100K	5%	1/10W
R103	1-216-077-00	METAL CHIP	15K	5%	1/10W
R104	1-216-085-00	METAL CHIP	33K	5%	1/10W
R105	1-216-097-00	METAL CHIP	100K	5%	1/10W
R112	1-216-049-00	METAL CHIP	1K	5%	1/10W
R113	1-216-077-00	METAL CHIP	15K	5%	1/10W
R114	1-216-077-00	METAL CHIP	15K	5%	1/10W
R117	1-216-077-00	METAL CHIP	15K	5%	1/10W
R118	1-216-077-00	METAL CHIP	15K	5%	1/10W
R121	1-216-077-00	METAL CHIP	15K	5%	1/10W
R122	1-216-077-00	METAL CHIP	15K	5%	1/10W
R151	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R152	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R153	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R154	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R155	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R156	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R157	1-216-085-00	METAL CHIP	33K	5%	1/10W
R158	1-216-076-00	METAL CHIP	13K	5%	1/10W
R159	1-216-085-00	METAL CHIP	33K	5%	1/10W
R160	1-216-081-00	METAL CHIP	22K	5%	1/10W
R161	1-216-093-00	METAL CHIP	68K	5%	1/10W
R162	1-216-085-00	METAL CHIP	33K	5%	1/10W
R163	1-216-308-00	METAL CHIP	4.7	5%	1/10W
R181	1-216-021-00	METAL CHIP	68	5%	1/10W
R182	1-216-021-00	METAL CHIP	68	5%	1/10W

Ref. No.	Part No.	Description	Remark
		< SWITCH >	
S101	1-572-085-11	SWITCH, LEAF (LIMIT SW)	
**			
*	A-4649-104-A	DISP BOARD, COMPLETE (M54)	
*	A-4649-110-A	DISP BOARD, COMPLETE (M43)	
		**************************	
		< CAPACITOR >	
C402	1-164-159-11	CERAMIC 0.1uF	50V
C403	1-126-154-11	ELECT 47uF 20%	6.3V
C404	1-161-494-00	CERAMIC 0.022uF	25V
C405	1-164-159-11	CERAMIC 0.1uF	50V
		< CONNECTOR >	
CN401	1-535-987-11	JAMPER, FILM (WITH TERMINAL)	
		< DIODE >	
D401	8-719-987-63	DIODE 1N4148M	
D402	8-719-987-63	DIODE 1N4148M	
D403	8-719-987-63	DIODE 1N4148M	
D404	8-719-987-63	DIODE 1N4148M	
D405	8-719-987-63	DIODE 1N4148M	
D406	8-719-987-63	DIODE 1N4148M	
D407	8-719-987-63	DIODE 1N4148M	
D408	8-719-987-63	DIODE 1N4148M	
D409	8-719-987-63	DIODE 1N4148M	
D410	8-719-987-63	DIODE 1N4148M	
D411	8-719-987-63	DIODE 1N4148M	
D412	8-719-121-24	DIODE RD9.1ESL	
		< FLUORESCENT INDICATOR >	
FLD401	1-519-681-11	INDICATOR TUBE, FLUORESCENT	
		< IC >	
IC401	8-759-061-40	IC uPD75216ACW-C73 (M54)	
IC401	8-759-070-44	IC uPD75216ACW-C93 (M43)	
IC402	8-741-100-48	IC SBX1610-59 (M54)	
		< RESISTOR >	
R401	1-249-435-11	CARBON 33K 5% 1/4W	
R402	1-249-435-11	CARBON 33K 5% 1/4W	
R403	1-249-435-11	CARBON 33K 5% 1/4W	
R404	1-249-435-11	CARBON 33K 5% 1/4W	
R405	1-249-435-11	CARBON 33K 5% 1/4W	
R406	1-249-425-11	CARBON 4.7K 5% 1/4W	
R407	1-249-425-11	CARBON 4.7K 5% 1/4W	
R408	1-249-439-11	CARBON 68K 5% 1/4W	

Ref. No.	Part No.	Description	Remark
		< SWITCH >	
S401	1-554-303-21	SWITCH, TACTILE (CONTINUE)	
S402	1-554-303-21	SWITCH, TACTILE (REPEAT)	
S403	1-554-303-21	SWITCH, TACTILE (	
S404	1-554-303-21	SWITCH, TACTILE (	
S405	1-554-303-21	SWITCH, TACTILE (SHUFFLE)	
S406	1-554-303-21	SWITCH, TACTILE (FADER)	
S407	1-554-303-21	SWITCH, TACTILE (	
S408	1-554-303-21	SWITCH, TACTILE (	
S409	1-554-303-21	SWITCH, TACTILE (PROGRAM)	
S410	1-554-303-21	SWITCH, TACTILE (TIME)	
S411	1-554-303-21	SWITCH, TACTILE (	
S412	1-554-303-21	SWITCH, TACTILE (OPEN/CLOSE)	
S413	1-554-303-21	SWITCH, TACTILE (	
S414	1-554-303-21	SWITCH, TACTILE (	
S415	1-554-303-21	SWITCH, TACTILE (EDIT)	
S416	1-554-303-21	SWITCH, TACTILE (TIME SET)	
S417	1-554-303-21	SWITCH, TACTILE (PEAK SERCH)	
S418	1-554-303-21	SWITCH, TACTILE (MUSIC SCAN)	
S419	1-554-303-21	SWITCH, TACTILE (1)	
S420	1-554-303-21	SWITCH, TACTILE (6)	
S421	1-554-303-21	SWITCH, TACTILE (11)	
S423	1-554-303-21	SWITCH, TACTILE (2)	
S424	1-554-303-21	SWITCH, TACTILE (7)	
S425	1-554-303-21	SWITCH, TACTILE (12)	
S427	1-554-303-21	SWITCH, TACTILE (3)	
S428	1-554-303-21	SWITCH, TACTILE (8)	
S431	1-554-303-21	SWITCH, TACTILE (4)	
S432	1-554-303-21	SWITCH, TACTILE (9)	
S435	1-554-303-21	SWITCH, TACTILE (5)	
S436	1-554-303-21	SWITCH, TACTILE (10)	
S439	1-554-303-21	SWITCH, TACTILE (>12)	
S440	1-554-303-21	SWITCH, TACTILE (CHECK)	
S441	1-554-303-21	SWITCH, TACTILE (CLEAR)	
S442	1-554-303-21	SWITCH, TACTILE (A.SPACE/A.CUE)	
		< VIBRATOR >	
X401	1-577-358-21	VIBRATOR, CERAMIC (4MHz)	
**			
	1-642-886-21	HP BOARD (M54)	
		**************	
		< CAPACITOR >	
C481	1-162-294-31	CERAMIC 0.001uF 10%	50V(M54)
C482	1-162-294-31	CERAMIC 0.001uF 10%	50V(M54)
C483	1-164-159-11	CERAMIC 0.1uF	50V(M54)

HP | LOADING | MAIN

	Ref. No.	Part No.	Description			Remark
			< JACK >			
	J481	1-568-519-41	JACK, LARGE TYPE (PHONES)(M54)			
			< RESISTOR >			
	R481	1-249-402-11	CARBON	56	5%	1/4W(M54)
	R482	1-249-402-11	CARBON	56	5%	1/4W(M54)

****

	Ref. No.	Part No.	Description			Remark
*		1-632-202-11	LOADING BOARD *************			
			< CONNECTOR >			
*	CN301	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P			
			< SWITCH >			
	S271	1-572-086-11	SWITCH, LEAF (OUT SW)			
	S272	1-572-086-11	SWITCH, LEAF (IN SW)			

****

	Ref. No.	Part No.	Description			Remark
*		A-4649-105-A	MAIN BOARD, COMPLETE (M54)			
*		A-4649-111-A	MAIN BOARD, COMPLETE (M43) *************************			
		4-902-345-01	HEAT SINK (EXCEPT M54:UK)			
*		4-941-237-01	HEAT SINK (M54:UK)			
			< CAPACITOR >			
	C205	1-126-163-11	ELECT	4.7uF	20%	50V
	C206	1-126-059-11	ELECT	10uF	20%	50V
	C207	1-126-059-11	ELECT	10uF	20%	50V
	C208	1-124-997-11	ELECT	470uF	20%	10V
	C209	1-124-997-11	ELECT	470uF	20%	10V
	C210	1-126-024-11	ELECT	220uF	20%	16V
	C211	1-124-997-11	ELECT	470uF	20%	10V
	C212	1-164-159-11	CERAMIC	0.1uF		50V
	C213	1-126-012-11	ELECT	470uF	20%	16V
	C214	1-126-012-11	ELECT	470uF	20%	16V
	C301	1-126-022-11	ELECT	47uF	20%	16V
	C302	1-126-301-11	ELECT	1uF	20%	50V
	C305	1-126-022-11	ELECT	47uF	20%	16V
	C306	1-164-159-11	CERAMIC	0.1uF		50V
	C307	1-164-159-11	CERAMIC	0.1uF		50V
	C308	1-164-159-11	CERAMIC	0.1uF		50V
	C311	1-130-491-00	MYLAR	0.047uF	5%	50V
	C312	1-161-374-11	CERAMIC	0.0015uF	20%	50V
	C313	1-161-494-00	CERAMIC	0.022uF		25V
	C314	1-162-306-11	CERAMIC	0.01uF	20%	16V
	C315	1-126-300-11	ELECT	0.47uF	20%	50V
	C317	1-164-159-11	CERAMIC	0.1uF		50V
	C318	1-164-159-11	CERAMIC	0.1uF		50V(M43)
	C319	1-162-282-31	CERAMIC	100PF	10%	50V
	C320	1-130-483-00	MYLAR	0.01uF	5%	50V
	C321	1-162-208-31	CERAMIC	24PF	5%	50V
	C322	1-124-994-11	ELECT	100uF	20%	10V
	C324	1-164-159-11	CERAMIC	0.1uF		50V
	C325	1-162-205-31	CERAMIC	18PF	5%	50V
	C326	1-162-205-31	CERAMIC	18PF	5%	50V
	C327	1-164-159-11	CERAMIC	0.1uF		50V
	C328	1-126-024-11	ELECT	220uF	20%	16V
	C329	1-126-024-11	ELECT	220uF	20%	16V
	C330	1-162-294-31	CERAMIC	0.001uF	10%	50V
	C331	1-164-159-11	CERAMIC	0.1uF		50V
	C332	1-164-159-11	CERAMIC	0.1uF		50V
	C333	1-164-159-11	CERAMIC	0.1uF		50V
	C335	1-164-159-11	CERAMIC	0.1uF		50V
	C351	1-126-022-11	ELECT	47uF	20%	16V
	C352	1-164-159-11	CERAMIC	0.1uF		50V
	C353	1-126-022-11	ELECT	47uF	20%	16V
	C354	1-164-159-11	CERAMIC	0.1uF		50V
	C355	1-126-022-11	ELECT	47uF	20%	16V
	C356	1-164-159-11	CERAMIC	0.1uF		50V
	C357	1-124-994-11	ELECT	100uF	20%	10V (M43)
	C357	1-124-997-11	ELECT	470uF	20%	10V (M54)
	C358	1-124-994-11	ELECT	100uF	20%	10V (M43)
	C358	1-124-997-11	ELECT	470uF	20%	10V (M54)
	C361	1-162-280-31	CERAMIC	82PF	10%	50V
	C362	1-162-280-31	CERAMIC	82PF	10%	50V
	C363	1-162-213-31	CERAMIC	39PF	5%	50V
	C364	1-162-213-31	CERAMIC	39PF	5%	50V
	C365	1-162-213-31	CERAMIC	39PF	5%	50V
	C366	1-162-213-31	CERAMIC	39PF	5%	50V
	C367	1-161-494-00	CERAMIC	0.022uF		25V
	C368	1-161-494-00	CERAMIC	0.022uF		25V
	C371	1-106-359-00	MYLAR	4700PF	5%	200V
	C372	1-106-359-00	MYLAR	4700PF	5%	200V
	C373	1-130-472-00	MYLAR	0.0012uF	5%	50V
	C374	1-130-472-00	MYLAR	0.0012uF	5%	50V
	C377	1-126-022-11	ELECT	47uF	20%	16V
	C378	1-126-022-11	ELECT	47uF	20%	16V
	C379	1-106-347-00	MYLAR	1500PF	5%	200V
	C380	1-106-347-00	MYLAR	1500PF	5%	200V
	C392	1-164-159-11	CERAMIC	0.1uF		50V(M43)
	C393	1-164-159-11	CERAMIC	0.1uF		50V(M43)
	C394	1-124-994-11	ELECT	100uF	20%	10V(M43)

Ref. No.	Part No.	Description	Remark
		< CONNECTOR >	
* CN204	1-564-511-11	PLUG, CONNECTOR 8P	
* CN301	1-568-843-11	SOCKET, CONNECTOR 28P	
* CN302	1-568-822-11	SOCKET, CONNECTOR 22P	
* CN381	1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P (M54)	
* CN382	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P (M54)	
* CN391	1-565-561-11	PIN, CONNECTOR 3P (AU BUS)(M43)	
		< DIODE >	
D207	8-719-114-49	DIODE RD7.5JSB2	
D208	8-719-109-89	DIODE RD5.6ESB2	
D209	8-719-987-63	DIODE 1N4148M	
D328	8-719-987-63	DIODE 1N4148M	
D344	8-719-987-63	DIODE 1N4148M	
D391	8-719-987-63	DIODE 1N4148M (M43)	
		< IC >	
IC202	8-759-630-21	IC M5290P-16	
IC203	8-759-945-58	IC RC4558P (M54)	
IC301	8-752-337-26	IC CXD2500AQ	
IC302	8-752-342-65	IC CXD2560M	
IC303	8-752-349-01	IC CXD2561AM	
IC306	8-759-503-91	IC TL082ACP (M54)	
IC306	8-759-945-58	IC RC4558P (M43)	
IC307	8-759-945-58	IC RC4558P	
		< JACK >	
J381	1-569-442-11	JACK, PIN 2P (LINE OUT)(M43)	
* J381	1-569-443-11	JACK, PIN 4P (LINE OUT)(M54)	
		< COIL >	
L301	1-408-403-00	INDUCTOR 3.3uH	
L321	1-408-403-00	INDUCTOR 3.3uH	
		< TRANSISTOR >	
Q202	8-729-140-96	TRANSISTOR 2SD774-34	
Q203	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q204	8-729-900-65	TRANSISTOR DTA144ES	
Q205	8-729-900-89	TRANSISTOR DTC144ES	
Q206	8-729-900-89	TRANSISTOR DTC144ES	
Q207	8-729-230-45	TRANSISTOR 2SC2458-YGR	
Q208	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q209	8-729-281-52	TRANSISTOR 2SC1815-Y (M54)	
Q341	8-729-900-65	TRANSISTOR DTA144ES	
Q342	8-729-900-65	TRANSISTOR DTA144ES	
Q343	8-729-900-65	TRANSISTOR DTA144ES	
Q344	8-729-900-89	TRANSISTOR DTC144ES	
Q371	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q372	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q373	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q374	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q375	8-729-231-55	TRANSISTOR 2SC2878-AB	
Q376	8-729-231-55	TRANSISTOR 2SC2878-AB	
Q392	8-729-900-80	TRANSISTOR DTC114ES (M43)	
		< RESISTOR >	
R204	1-249-425-11	CARBON 4.7K 5% 1/4W	
R205	1-249-425-11	CARBON 4.7K 5% 1/4W	
R206	1-249-417-11	CARBON 1K 5% 1/4W	
R207	1-249-417-11	CARBON 1K 5% 1/4W	
R208	1-249-423-11	CARBON 3.3K 5% 1/4W	
R209	1-249-413-11	CARBON 470 5% 1/4W	
R210	1-249-429-11	CARBON 10K 5% 1/4W	(M54)
R211	1-249-410-11	CARBON 270 5% 1/4W	(M54)
R214	1-249-417-11	CARBON 1K 5% 1/4W	
R301	1-249-417-11	CARBON 1K 5% 1/4W	
R302	1-249-417-11	CARBON 1K 5% 1/4W	
R303	1-249-421-11	CARBON 2.2K 5% 1/4W	
R304	1-249-417-11	CARBON 1K 5% 1/4W	
R306	1-249-413-11	CARBON 470 5% 1/4W	
R309	1-249-405-11	CARBON 100 5% 1/4W	
R311	1-249-423-11	CARBON 3.3K 5% 1/4W	
R312	1-249-429-11	CARBON 10K 5% 1/4W	
R313	1-249-423-11	CARBON 3.3K 5% 1/4W	
R314	1-249-429-11	CARBON 10K 5% 1/4W	
R315	1-249-417-11	CARBON 1K 5% 1/4W	
R316	1-249-417-11	CARBON 1K 5% 1/4W	
R317	1-249-419-11	CARBON 1.5K 5% 1/4W	
R318	1-249-441-11	CARBON 100K 5% 1/4W	
R319	1-247-903-00	CARBON 1M 5% 1/4W	
R320	1-249-417-11	CARBON 1K 5% 1/4W	
R321	1-249-417-11	CARBON 1K 5% 1/4W	
R322	1-249-417-11	CARBON 1K 5% 1/4W	
R323	1-249-417-11	CARBON 1K 5% 1/4W	
R324	1-249-417-11	CARBON 1K 5% 1/4W	
R325	1-249-417-11	CARBON 1K 5% 1/4W	
R326	1-249-417-11	CARBON 1K 5% 1/4W	
R327	1-247-903-00	CARBON 1M 5% 1/4W	
R328	1-247-895-00	CARBON 470K 5% 1/4W	
R330	1-249-417-11	CARBON 1K 5% 1/4W	(M43)
R343	1-249-441-11	CARBON 100K 5% 1/4W	
R344	1-249-441-11	CARBON 100K 5% 1/4W	
R345	1-249-425-11	CARBON 4.7K 5% 1/4W	
R346	1-249-425-11	CARBON 4.7K 5% 1/4W	
R347	1-249-441-11	CARBON 100K 5% 1/4W	
R351	1-249-436-11	CARBON 39K 5% 1/4W	

MAIN | MOTOR VOL

Ref. No.	Part No.	Description				Remark
R352	1-249-436-11	CARBON	39K	5%	1/4W	
R353	1-249-436-11	CARBON	39K	5%	1/4W	
R354	1-249-436-11	CARBON	39K	5%	1/4W	
R355	1-249-436-11	CARBON	39K	5%	1/4W	
R356	1-249-436-11	CARBON	39K	5%	1/4W	
R357	1-249-436-11	CARBON	39K	5%	1/4W	
R358	1-249-436-11	CARBON	39K	5%	1/4W	
R361	1-249-431-11	CARBON	15K	5%	1/4W	(M54)
R361	1-249-432-11	CARBON	18K	5%	1/4W	(M43)
R362	1-249-431-11	CARBON	15K	5%	1/4W	(M54)
R362	1-249-432-11	CARBON	18K	5%	1/4W	(M43)
R363	1-249-431-11	CARBON	15K	5%	1/4W	(M54)
R363	1-249-432-11	CARBON	18K	5%	1/4W	(M43)
R364	1-249-431-11	CARBON	15K	5%	1/4W	(M54)
R364	1-249-432-11	CARBON	18K	5%	1/4W	(M43)
R365	1-249-438-11	CARBON	56K	5%	1/4W	
R366	1-249-438-11	CARBON	56K	5%	1/4W	
R367	1-249-438-11	CARBON	56K	5%	1/4W	
R368	1-249-438-11	CARBON	56K	5%	1/4W	
R369	1-249-419-11	CARBON	1.5K	5%	1/4W	
R370	1-249-419-11	CARBON	1.5K	5%	1/4W	
R371	1-249-419-11	CARBON	1.5K	5%	1/4W	
R372	1-249-419-11	CARBON	1.5K	5%	1/4W	
R373	1-247-887-00	CARBON	220K	5%	1/4W	
R374	1-247-887-00	CARBON	220K	5%	1/4W	
R375	1-249-409-11	CARBON	220	5%	1/4W	
R376	1-249-409-11	CARBON	220	5%	1/4W	
R377	1-249-409-11	CARBON	220	5%	1/4W	
R378	1-249-409-11	CARBON	220	5%	1/4W	
R379	1-249-425-11	CARBON	4.7K	5%	1/4W	
R380	1-249-425-11	CARBON	4.7K	5%	1/4W	
R381	1-249-425-11	CARBON	4.7K	5%	1/4W	
R382	1-249-425-11	CARBON	4.7K	5%	1/4W	
R383	1-249-413-11	CARBON	470	5%	1/4W	
R384	1-249-413-11	CARBON	470	5%	1/4W	
R385	1-249-393-11	CARBON	10	5%	1/4W	
R386	1-249-393-11	CARBON	10	5%	1/4W	
R388	1-249-393-11	CARBON	10	5%	1/4W	(M43)
R389	1-249-413-11	CARBON	470	5%	1/4W	(M54)
R390	1-249-413-11	CARBON	470	5%	1/4W	(M54)
R395	1-249-429-11	CARBON	10K	5%	1/4W	(M43)
R396	1-247-848-11	CARBON	5.1K	5%	1/4W	
R397	1-247-848-11	CARBON	5.1K	5%	1/4W	
R398	1-247-848-11	CARBON	5.1K	5%	1/4W	
R399	1-247-848-11	CARBON	5.1K	5%	1/4W	

Ref. No.	Part No.	Description	Remark

< VIBRATOR >

X327	1-579-314-11	VIBRATOR, CRYSTAL (22.5792MHz)

****

*	A-4649-107-A	MOTOR VOL BOARD, COMPLETE (M54)

****

*	4-922-980-01	HOLDER (LED) (M54)

< CAPACITOR >

C451	1-124-443-00	ELECT	100uF	20%	10V(M54)
C452	1-124-443-00	ELECT	100uF	20%	10V(M54)
C471	1-124-443-00	ELECT	100uF	20%	10V(M54)
C472	1-124-768-11	ELECT	4.7uF	20%	50V(M54)
C473	1-164-159-11	CERAMIC	0.1uF		50V(M54)

< CONNECTOR >

* CN451	1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P (M54)
* CN453	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P (M54)
CN472	1-506-468-11	CONNECTOR 3P, MALE (M54)

< DIODE >

D471	8-719-970-49	DIODE BR4361F LINE OUT PHONE LEVEL)(M54)

< IC >

IC451	8-759-981-89	IC RC4556S (M54)
IC471	8-759-962-08	IC BA6208 (M54)

< RESISTOR >

R451	1-249-435-11	CARBON	33K	5%	1/4W	(M54)
R452	1-249-435-11	CARBON	33K	5%	1/4W	(M54)
R453	1-249-432-11	CARBON	18K	5%	1/4W	(M54)
R454	1-249-432-11	CARBON	18K	5%	1/4W	(M54)
R455	1-249-422-11	CARBON	2.7K	5%	1/4W	(M54)
R456	1-249-422-11	CARBON	2.7K	5%	1/4W	(M54)
R457	1-249-429-11	CARBON	10K	5%	1/4W	(M54)
R458	1-249-429-11	CARBON	10K	5%	1/4W	(M54)
R461	1-249-399-11	CARBON	33	5%	1/4W	(M54)
R462	1-249-399-11	CARBON	33	5%	1/4W	(M54)
R471	1-249-411-11	CARBON	330	5%	1/4W	(M54)
R472	1-249-417-11	CARBON	1K	5%	1/4W	(M54)
R473	1-249-417-11	CARBON	1K	5%	1/4W	(M54)

< VARIABLE RESISTOR >

RV451	1-241-810-11	RES, VAR, CARBON 10K/10K (LINE OUT PHONE LEVEL)(M54)

Ref. No.	Part No.	Description	Remark
*	1-642-887-21	P.SW BOARD **********	
		< SWITCH >	
S491	1-554-118-00	SWITCH, PUSH (1 KEY)(POWER)	

****

Ref. No.	Part No.	Description	Remark
*	1-642-883-21	POWER BOARD ***********	
		< CAPACITOR >	
C201	1-124-572-11	ELECT 100uF 20%	63V
C202	1-126-059-11	ELECT 10uF 20%	50V
C203	1-124-556-11	ELECT 2200uF 20%	16V
C204	1-126-937-11	ELECT 4700uF 20%	16V
C221	1-164-159-11	CERAMIC 0.1uF	50V
		< CONNECTOR >	
* CN201	1-564-511-11	PLUG, CONNECTOR 8P	
* CN203	1-580-230-11	PIN, CONNECTOR (PC BOARD) 3P	
		< DIODE >	
D201	8-719-200-02	DIODE 10E2 (M43:E,Saudi Arabia)	
D201	8-719-200-82	DIODE 11ES2 (EXCEPT M54/M43:E,Saudi Arabia)	
D202	8-719-110-03	DIODE RD7.5ES-B2	
D203	8-719-200-02	DIODE 10E2 (M43:E,Saudi Arabia)	
D203	8-719-200-82	DIODE 11ES2 (EXCEPT M54/M43:E,Saudi Arabia)	
D204	8-719-200-02	DIODE 10E2 (M43:E,Saudi Arabia)	
D204	8-719-200-82	DIODE 11ES2 (EXCEPT M54/M43:E,Saudi Arabia)	
D205	8-719-200-02	DIODE 10E2 (M43:E,Saudi Arabia)	
D205	8-719-200-82	DIODE 11ES2 (EXCEPT M54/M43:E,Saudi Arabia)	
D206	8-719-200-02	DIODE 10E2 (M43:E,Saudi Arabia)	
D206	8-719-200-82	DIODE 11ES2 (EXCEPT M54/M43:E,Saudi Arabia)	
		< IC >	
IC201	8-759-633-42	IC M5293L	
		< TRANSISTOR >	
Q201	8-729-119-76	TRANSISTOR 2SA1175-HFE	

Ref. No.	Part No.	Description	Remark
		< RESISTOR >	
R201	1-249-435-11	CARBON 33K 5%	1/4W
R202	1-249-438-11	CARBON 56K 5%	1/4W
R203	1-249-429-11	CARBON 10K 5%	1/4W
		< SWITCH >	
⚠S201	1-571-722-11	SWITCH, VOLTAGE SELECTION (E,Saudi Arabia)	

****

Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS *************	
⚠23	1-558-946-21	CORD, POWER (M54:UK)	
⚠23	1-574-358-31	CORD, POWER(WITH CONNECTOR)(Australian)	
⚠23	1-575-651-21	CORD, POWER (AEP,Italian,Saudi Arabia)	
⚠23	1-575-653-21	CORD, POWER (E)	
⚠23	1-590-379-11	CORD, POWER (M43:UK)	
28	1-575-160-11	WIRE, FLAT TYPE (22 CORE)	
⚠32	1-569-007-11	ADAPTER, CONVERSION 2P (E)	
⚠32	1-569-008-11	ADAPTER, CONVERSION 2P (Saudi Arabia)	
* 110	1-452-538-11	MAGNET	
156	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
⚠157	8-848-144-11	DEVICE, OPTICAL KSS-240A	
D471	8-719-970-49	DIODE BR4361F (M54)	
M101	X-4917-523-3	BASE (OUTSERT) ASSY	
M102	X-4917-504-1	MOTOR ASSY	
M191	A-4604-363-A	MOTOR (L) ASSY	
⚠T901	1-449-922-11	TRANSFORMER, POWER (EXCEPT E,Saudi Arabia)	
⚠T901	1-449-923-11	TRANSFORMER, POWER (E,Saudi Arabia)	

****

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS	
		********************************	
	1-465-867-11	REMOTE COMMANDER (RM-D597)(M54)	
	1-558-271-11	CORD, CONNECTION (MADE IN FRANCE)	
	1-559-533-11	CORD, CONNECTION (MADE IN JAPAN)	
	2-181-754-01	COVER, BATTERY (M54)	
	3-754-665-11	MANUAL, INSTRUCTION (English/French Spanish/Portuguese)(M54:AEP, E, UK)	
	3-754-665-41	MANUAL, INSTRUCTION (Dutch/German Italian/Swedish)(M54:AEP)	
*	4-922-998-01	CUSHION (MADE IN JAPAN)	
*	4-927-355-03	CUSHION (MADE IN FRANCE)	
*	4-948-882-31	INDIVIDUAL CARTON (MADE IN FRANCE M43:AEP, Italian, UK)	
*	4-948-882-41	INDIVIDUAL CARTON (MADE IN FRANCE M54:AEP, UK)	
*	4-949-971-21	INDIVIDUAL CARTON (MADE IN JAPAN M43:AEP, Australian)	
*	4-949-971-41	INDIVIDUAL CARTON (MADE IN JAPAN M54:E, AEP)	

****

HARDWARE LIST

****

#1	17-682-548-09	SCREW +BVTT 3X8 (S)
#2	27-682-547-09	SCREW +B 3X6
#3	37-682-547-04	SCREW +BVTT 3X6 (S)
#4	47-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S
#5	57-621-255-15	SCREW +P 2X3
#6	67-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S
#7	77-621-775-10	SCREW +B 2.6X4

9-957-062-11

Sony Corporation
Audio Group

English
92C0272-1
Printed in Japan
© 1992.3
Published by Customer Relations and Service Group

CDP-C325M/C422M

SERVICE MANUAL

AEP Model
UK Model
E Model
Australian Model

Photo: CDP-C325M

Model Name Using Similar Mechanism	CDP-C225/C325
Optical Pick-up Block Type	BU-5BD8B

SPECIFICATIONS

	CDP-C325M	CDP-C422M
System	Compact disc digital audio system	
Laser	Semiconductor laser (λ = 780 nm) Emission duration: continuous	
Laser output	Max. 44.6 μW* * This output is the value measured at a distance of about 200 mm from the objective lens surface on the Optical Pick-up Block.	
Frequency response	2 Hz – 20 kHz (±0.5 dB)	
Signal to noise ratio	More than 100 dB	
Dynamic range	More than 98 dB	
Harmonic distortion	Less than 0.005% (1 kHz)	
Channel separation	More than 100 dB (1 kHz)	
Wow and flutter	Below measurable limit	
Outputs LINE OUT (phono jacks)	Output level 2 V (at 50 kilohms) Load impedance over 10 kilohms	
HEADPHONES (stereo phone jack)	Output level 0 – 10 mW (variable) (at 32 ohms)	

General

Power requirements	UK, Australian model: 240 V AC, 50/60 Hz AEP model: 220 – 230 V AC, 50/60 Hz E model: 110 – 120 or 220 – 240 V AC adjustable, 50/60 Hz
Power consumption	12 W
Dimensions (not including projecting parts and controls)	Approx. 355 × 120 × 385 mm (w/h/d) (14 × 4¾ × 15¼ inches)
Weight	Approx. 5.0 kg (11 lbs 01 oz)

Supplied accessories

	CDP-C325M	CDP-C422M
Audio signal connecting cord	1 (phono plug × 2 ↔ phono plug × 2)	
Remote commander	1 (RM-D325)	
Sony SUM-3 (NS) batteries	2	

Design and specifications subject to change without notice.

MICROFILM

COMPACT DISC PLAYER

SONY®

For the United Kingdom and European Countries.

CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

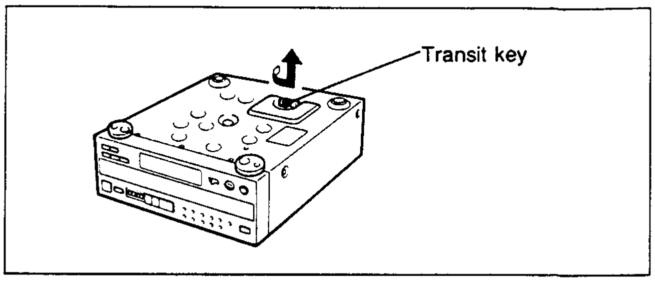
NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30cm away from the objective lens.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

Note on the Transit Key

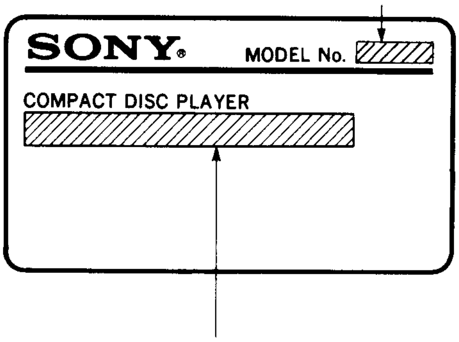


The transit key on the bottom exterior of the unit protects the optical system against shock during transportation. Before operating the CD player, be sure to remove the key by following the instructions on the label, and store it in a safe place.

When transporting the unit, replace the key in its original hole and lock it in place.

MODEL IDENTIFICATION

— Specification Label —



CDP-C325M
CDP-C422M

AEP model: AC: 220−230V~50/60Hz
UK, AUS model: AC: 240V~50/60Hz
E model: AC: 110−120, 220−240V~50/60Hz 12W

- AUS: Australian model

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs a laser. Therefore, be sure to follow carefully the instructions below when servicing.

> **CAUTION**
> Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

1. Laser Diode Properties
   - Material: GaAlAs
   - Wavelength: 780 nm
   - Emission Duration: continuous
   - Laser Output Power: less than 44.6 μW*
     - * This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block.
2. During service, do not take the Optical Pick-up Block apart, and do not adjust the APC circuit. If there is a breakdown in the APC circuit (including laser diode), replace the entire Optical Pick-up Block (including APC board).

BESKYTTELSE AF ØJNE MOD LASERSTRÅLING UNDER SERVICE

I dette apparat anvendes laserlys. Derfor skal nedenstående instruktioner nøje følges under service.

Følg iøvrigt instruktionerne i servicemanualen.

ADVARSEL!!

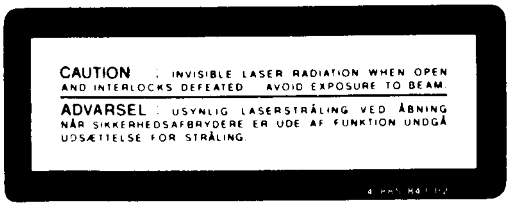
Under service må øjnene ikke komme nær objektiv-linsen på den optiske pick-up enhed. I tilfælde af at det er nødvendigt at kontrollere udsendelsen af laserlys, skal det ske i en afstand af mere end 25 cm fra den optiske pick-up.

1. Laser-didoe data
   - Materiale: GaAlAs
   - Bølgelængde: 780 nm
   - Udstråling: Kontinuerlig
   - Laseroutput: Max. 0,4 mW*
     - * Målt i 1,6 mm afstand fra overfladen af objektiv-linsen pa den optiske pick-up enhed.
   - Klassifikation: Klasse IIIb.
2. Adskil aldrig den optiske pick-up enhed under service, og juster ikke APC kredsløbet (Automatic Power Control). Hvis APC kredsløbet (incl. laser-dioden) bryder ned, skal hele den optiske pick-up enhed (incl. APC printkortet) udskiftes.

LASER ADVARSEL MÆRKNING

Følgende mærkning findes indvendig i apparatet:

1. Advarsel Mærkning



CAUTION : INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.

ADVARSEL : USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION UNDGÅ UDSÆTTELSE FOR STRÅLING.

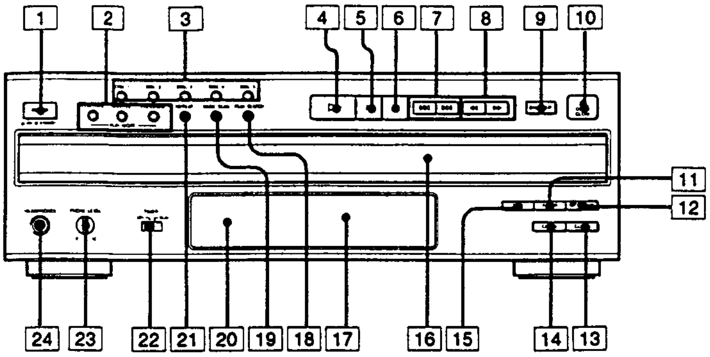
VAROITUS: Laite sisältää, laserdiodin, joka lähettää (näkymätöntä) silmille vaarallista lasersateilyä.

SECTION 1
GENERAL

This section is extracted from instruction manual.

1-1. LOCATION AND CONTROLS

Front Panel

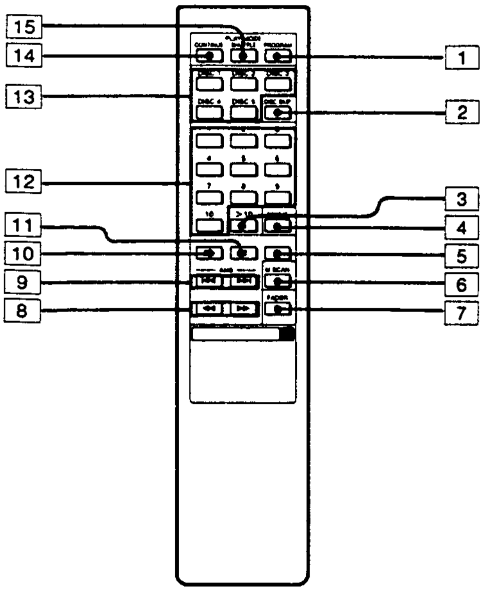


Refer to the pages indicated in ( ) for details.

1 POWER switch (page 18)
2 PLAY MODE buttons
CONTINUE button (page 18)
SHUFFLE button (page 28)
PROGRAM button (page 30)
3 DISC 1-5 buttons (page 18)
4 ► (play) button (page 18)
5 ❚❚ (pause) button (page 18)
6 ■ (stop) button (page 18)
7 ⏮/⏭ (AMS*) buttons (page 24)
8 ◀◀/▶▶ (manual search) buttons (page 26)
9 DISC SKIP button (page 18)
10 ⏏ OPEN/CLOSE button (page 18)
11 FADER button (page 44)
12 EDIT/TIME FADE button (page 36)
13 CLEAR (program clear) button (page 34)
14 CHECK (program check) button (page 34)
15 TIME button (page 22)
16 Disc tray (page 18)
17 Display window
18 PEAK SEARCH button (page 48)
19 MUSIC SCAN button (page 42)
20 Remote sensor (CDP-C325M only)
21 REPEAT button (page 42)
22 TIMER switch (CDP-C325M only) (page 50)
23 PHONE LEVEL control (CDP-C325M only) (page 18)
24 HEADPHONES jack (CDP-C325M only)

* AMS is the abbreviation of Automatic Music Sensor.

Remote Commander



Refer to the pages indicated in ( ) for details.

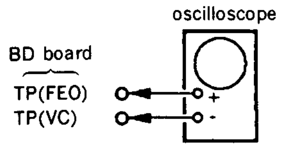
CDP-C325M only
1 PROGRAM button (page 30)
2 DISC SKIP button (page 18)
3 >10 (over 10) button (page 24)
4 REPEAT button (page 42)
5 ■ (stop) button (page 18)
6 MUSIC SCAN button (page 42)
7 FADER button (page 44)
8 ◀◀ ▶▶ (manual search) buttons (page 26)
9 ⏮ ⏭ (AMS) buttons (page 24)
10 ► (play) button (page 18)
10 ❚❚ (pause) button (page 18)
11 Numeric buttons (1-10) (page 24)
13 DISC 1-5 buttons (page 18)
14 CONTINUE button (page 18)
15 SHUFFLE button (page 28)

SECTION 2
ELECTRICAL BLOCK CHECKING

Note :

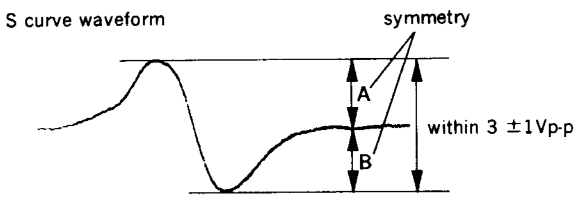
1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10MΩ impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S Curve Check


oscilloscope
BD board
TP(FEO)
TP(VC)
+
-

Procedure :

1. Connect oscilloscope to test point TP (FEO) on BD board.
2. Connect between test point TP (FES) and TP (VC) by lead wire.
3. Turned Power switch on and actuate the focus serch. (actuate the focus serch when disc table is moving in and out.)
4. Check the oscilloscope waveform (S curve) is symmetrical between A and B. And confirm peak to peak level within 3±1Vp-p.

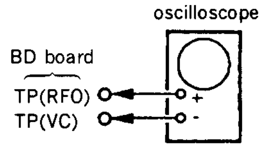

S curve waveform
symmetry
A
B
within 3 ±1Vp-p

5. After check, remove the lead wire connected in step 2.

Note : • Try to mesure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.

• Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check

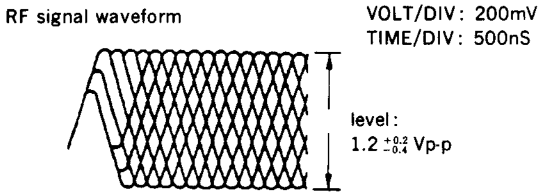

oscilloscope
BD board
TP(RFO)
TP(VC)
+
-

Procedure :

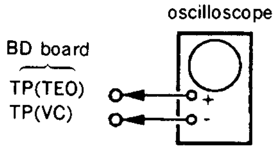
1. Connect oscilloscope to test point TP (RFO) on BD board.
2. Turn Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note :

Clear RF signal waveform means that the shape "◇" can be clearly distinguished at the center of the waveform.

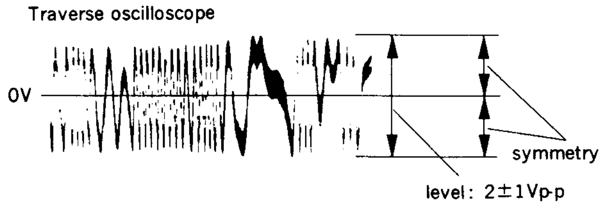

RF signal waveform
VOLT/DIV: 200mV
TIME/DIV: 500nS
level :
1.2 +0.2 -0.4 Vp-p

E-F Balance Check


oscilloscope
BD board
TP(TEO)
TP(VC)
+
-

Procedure :

1. Connect test point TP (ADJ) to ground and TP (TES) to TP (VC) with lead wire.
2. Connect oscilloscope to test point TP (TEO) on BD board.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the osilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level.

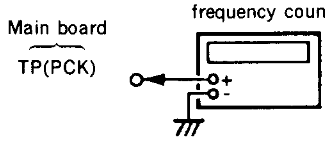

Traverse oscilloscope
0V
symmetry
level: 2±1Vp-p

6. Remove the lead wire connected in step 1.

RF PLL Free-run Frequency Check

Procedure :

1. Connect frequency counter to test point (PCK) with lead wire.


frequency counter
Main board
TP(PCK)
+
-

2. Turn Power switch on.
3. Confirm that reading on frequency counter is 4.3218MHz.

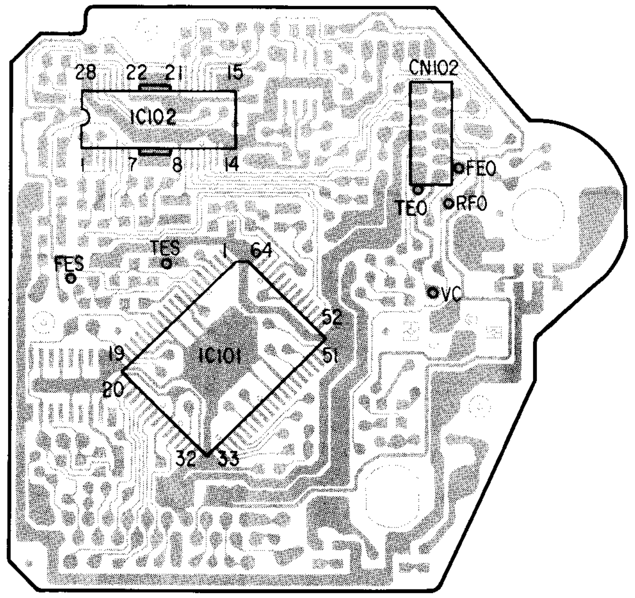
Focus/Tracking Gain

This gain has a margin, so even if it is slightly off.
There is no problem.
Therefore, do not perform, this adjustment.
Please note that it should be fixed to mechanical center position when you moved and do not know original position.

Adjustment Locations :

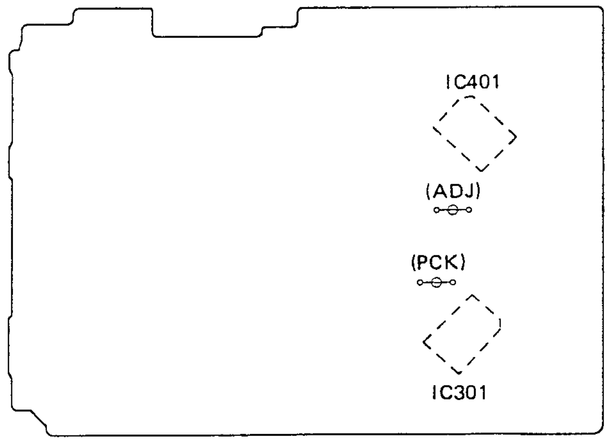
【BD Board】

—Conductor Side—


28
22
21
15
IC102
1
7
8
14
CN102
FEO
TEO
RFO
FES
TES
1
64
VC
52
51
IC101
19
20
32
33

【MAIN Board】

—Component Side—


IC401
(ADJ)
(PCK)
IC301

3-1.

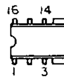
POWE

HP B

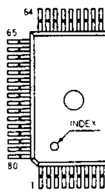
3-2.

BA62

CXA1



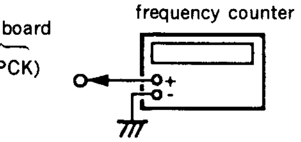
CXD2
CXP5
CXP5


64
65
80
1
INDEX

MARKI

equency Check

y counter to test point (PCK) with lead


board
PCK)
frequency counter
+
-

ch on.

ing on frequency counter is 4.3218MHz.

n

in, so even if it is slightly off.

form, this adjustment.

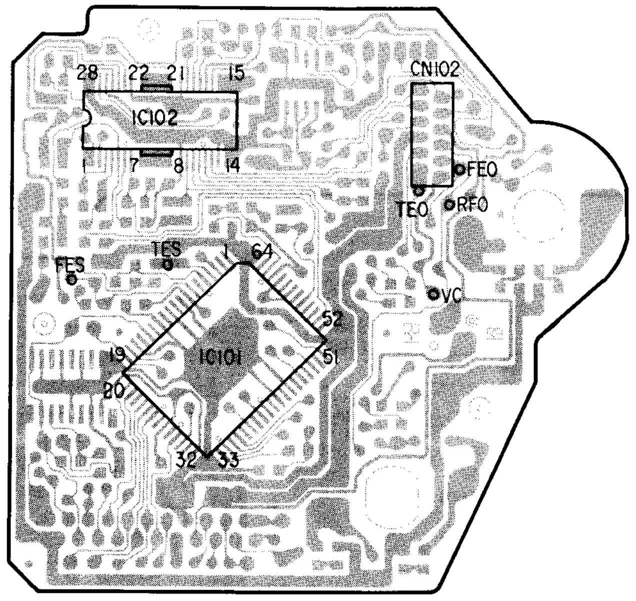
hould be fixed to mechanical center

ved and do not know original position.

Adjustment Locations:

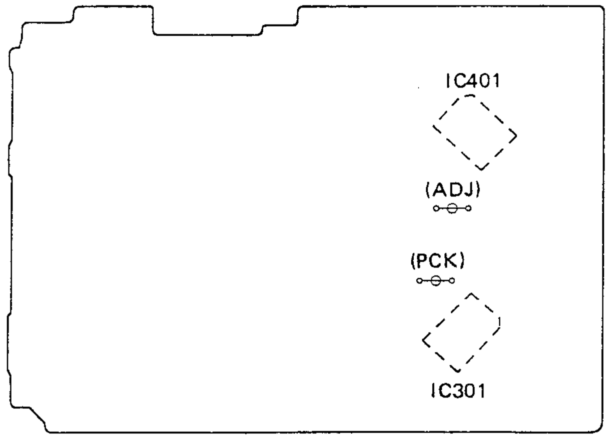
【BD Board】

—Conductor Side—


28
22
21
15
IC102
1
7
8
14
CN102
FEO
TEO
RFO
FES
TES
1
64
VC
52
51
19
20
IC101
32
33

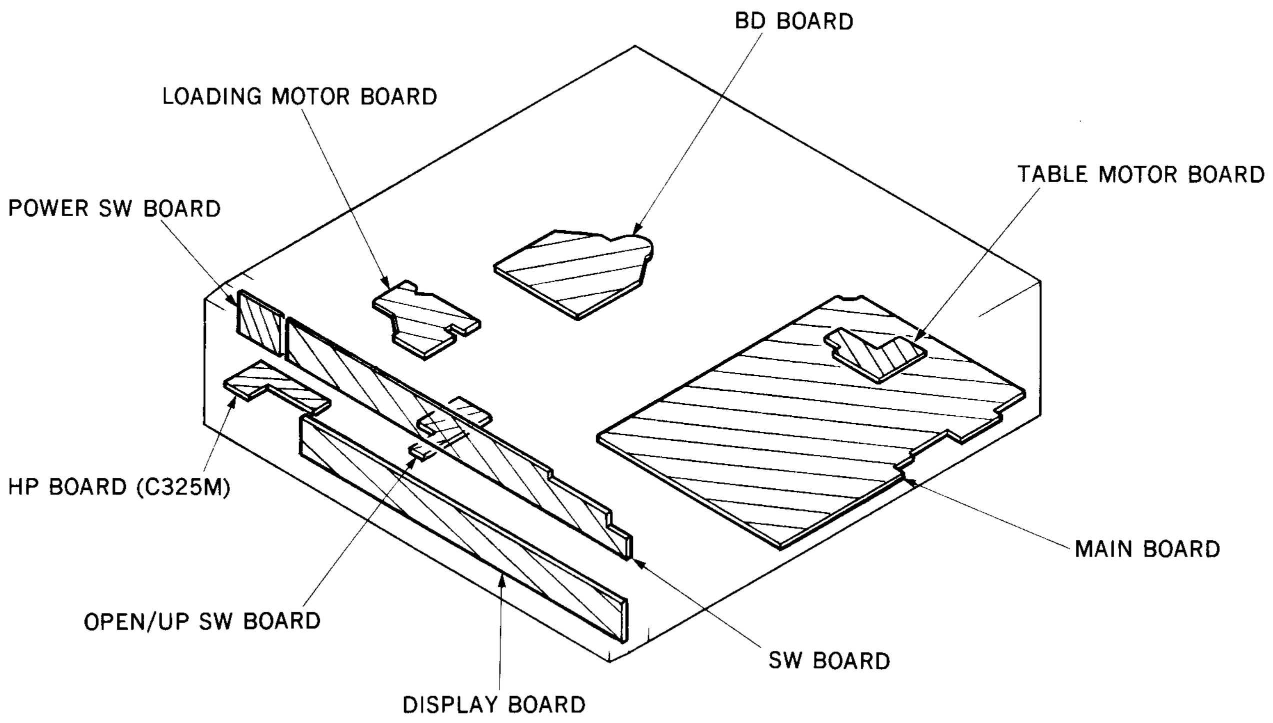
【MAIN Board】

—Component Side—

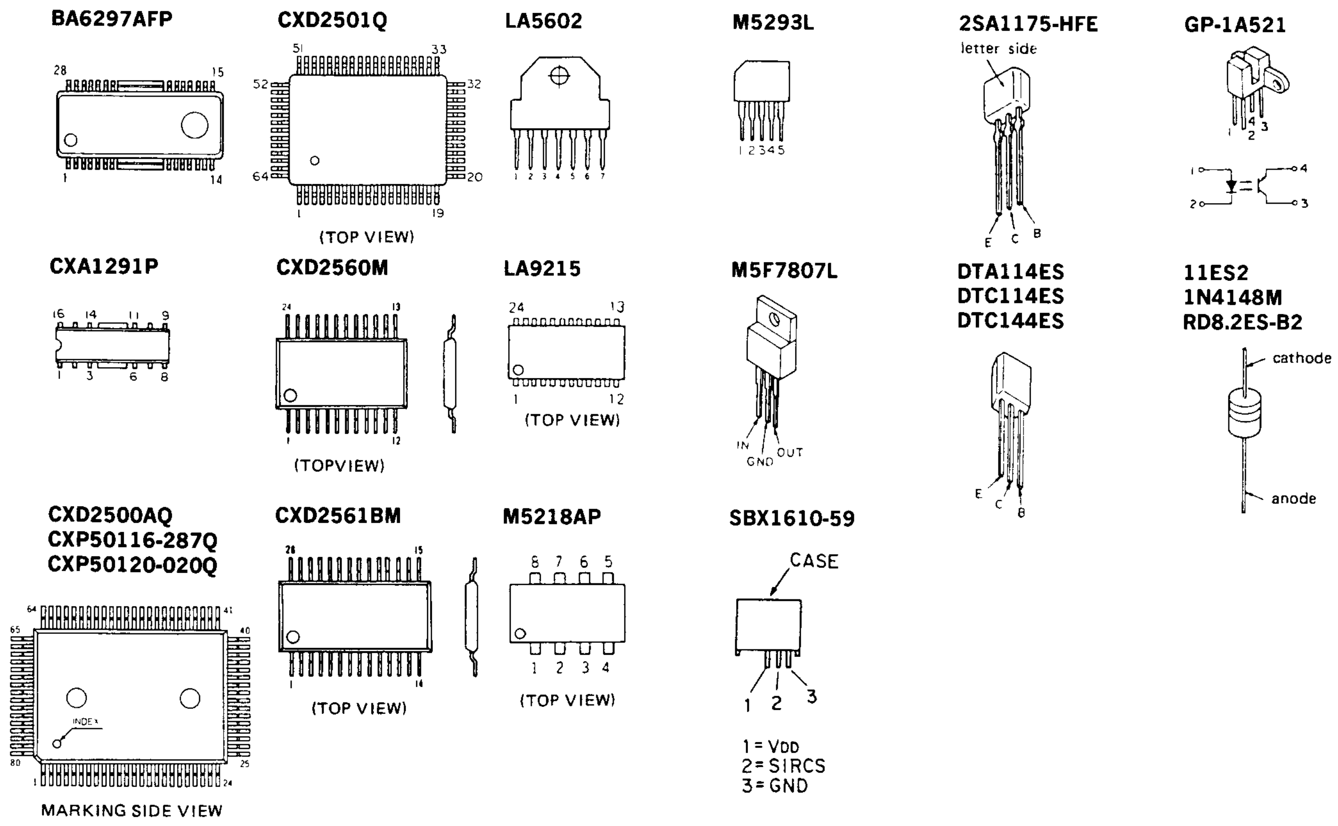

IC401
(ADJ)
(PCK)
IC301

SECTION 3
DIAGRAMS

3-1. CIRCUIT BOARDS LOCATION

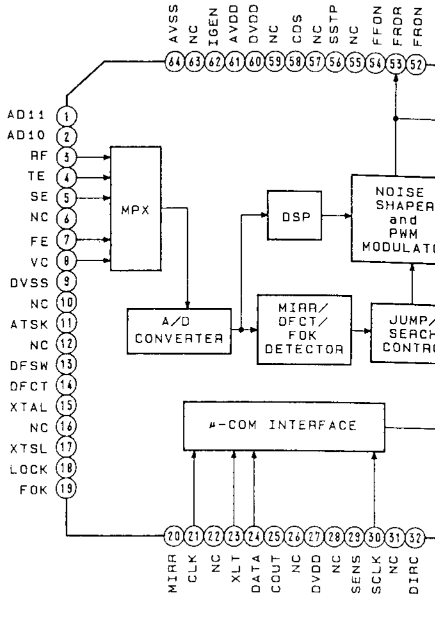

BD BOARD
LOADING MOTOR BOARD
TABLE MOTOR BOARD
POWER SW BOARD
HP BOARD (C325M)
MAIN BOARD
OPEN/UP SW BOARD
SW BOARD
DISPLAY BOARD

3-2. SEMICONDUCTOR LEAD LAYOUTS

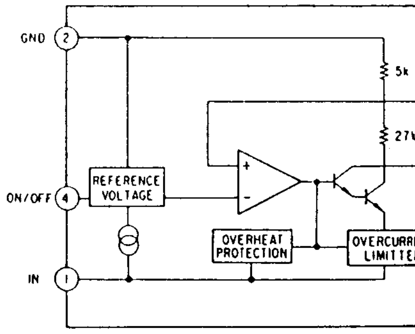

BA6297AFP
28
15
1
14
CXD2501Q
51
33
52
32
64
20
1
19
(TOP VIEW)
LA5602
1 2 3 4 5 6 7
M5293L
1 2 3 4 5
2SA1175-HFE
letter side
E C B
GP-1A521
1 2 3 4
1
2
4
3
CXA1291P
16 14 11 9
1 3 6 8
CXD2560M
24
13
1
12
(TOPVIEW)
LA9215
24
13
1
12
(TOP VIEW)
M5F7807L
IN
GND
OUT
DTA114ES
DTC114ES
DTC144ES
E C B
11ES2
1N4148M
RD8.2ES-B2
cathode
anode
CXD2500AQ
CXP50116-287Q
CXP50120-020Q
64
41
65
40
80
25
1
24
INDEX
MARKING SIDE VIEW
CXD2561BM
28
15
1
14
(TOP VIEW)
M5218AP
8 7 6 5
1 2 3 4
(TOP VIEW)
SBX1610-59
CASE
1 2 3
1 = VDD
2 = SIRCS
3 = GND

• IC Block Diagrams

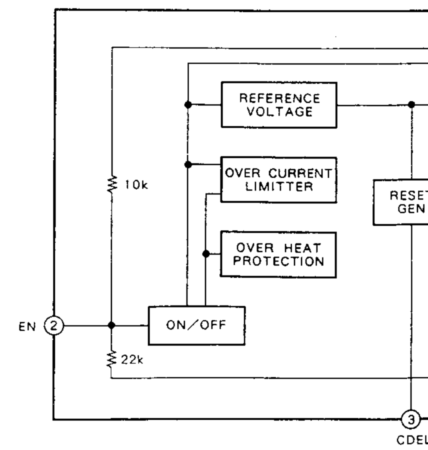
IC101 CXD2501Q


AVSS
NC
IGEN
AVDD
DVDD
NC
CDS
NC
SSTP
NC
FFON
FRDR
FRON
64 63 62 61 60 59 58 57 56 55 54 53 52
AD11 1
AD10 2
RF 3
TE 4
SE 5
NC 6
FE 7
VC 8
DVSS 9
NC 10
ATSK 11
NC 12
DFSW 13
DFCT 14
XTAL 15
NC 16
XTSL 17
LOCK 18
FOK 19
MPX
DSP
NOISE
SHAPER
and
PWM
A/D
CONVERTER
MIRR/
DFCT/
FOK
DETECTOR
JUMP/
μ-COM INTERFACE
20 21 22 23 24 25 26 27 28 29 30 31 32
MIRR
CLK
NC
XLT
DATA
COUT
NC
DVDD
NC
SENS
SCLK
NC
DIRC

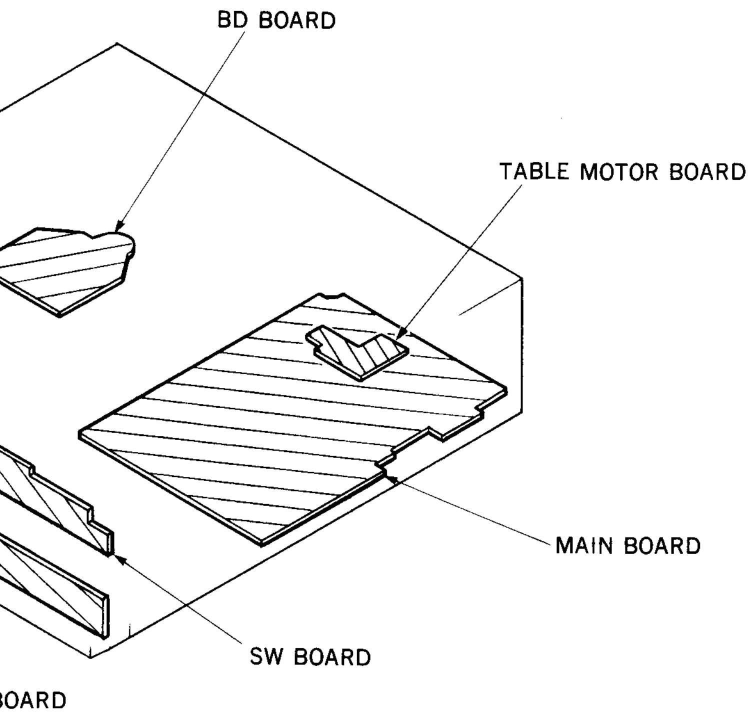
IC201 M5293L


GND 2
5k
ON/OFF 4
REFERENCE VOLTAGE
OVERHEAT PROTECTION
IN 1

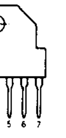
IC202 LA5602


REFERENCE VOLTAGE
OVER CURRENT LIMITTER
OVER HEAT PROTECTION
10k
EN 2
ON/OFF
22k
3

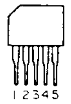
SECTION 3
DIAGRAMS


BD BOARD
TABLE MOTOR BOARD
MAIN BOARD
SW BOARD
OARD

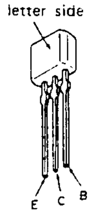
02



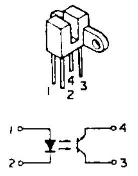
M5293L



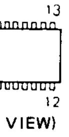
2SA1175-HFE


letter side
E
C
B

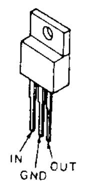
GP-1A521



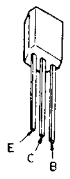
5



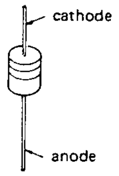
M5F7807L



DTA114ES
DTC114ES
DTC144ES

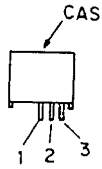


11ES2
1N4148M
RD8.2ES-B2


cathode
anode

BAP

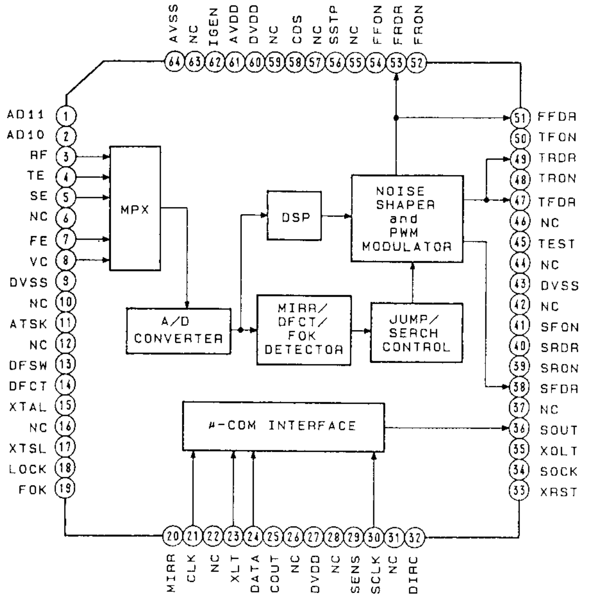
SBX1610-59



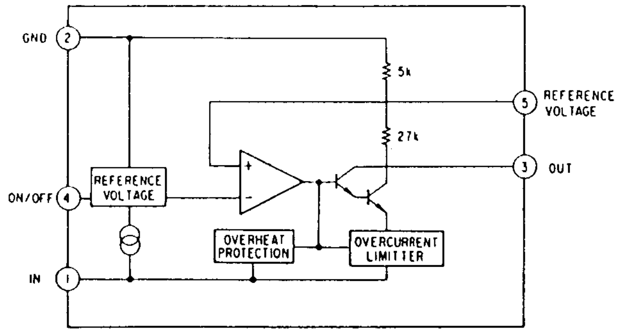
1 = VDD
2 = SIRCS
3 = GND

• IC Block Diagrams

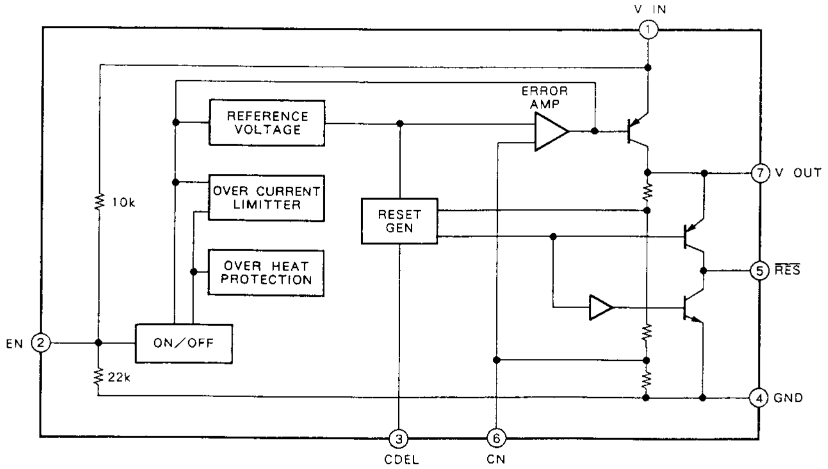
IC101 CXD2501Q


AVSS
NC
IGEN
AVDD
DVDD
NC
CDS
NC
SSTP
NC
FFON
FRDR
FRON
AD11
AD10
RF
TE
SE
NC
FE
VC
DVSS
NC
ATSK
NC
DFSW
DFCT
XTAL
NC
XTSL
LOCK
FOK
MPX
A/D CONVERTER
DSP
MIRR/ DFCT/ FOK DETECTOR
NOISE SHAPER and PWM MODULATOR
JUMP/ SERCH CONTROL
μ-COM INTERFACE
FFDR
TFON
TRDR
TRON
TFDR
NC
TEST
NC
DVSS
NC
SFON
SRDR
SRON
SFDR
NC
SOUT
XOLT
SOCK
XRST
MIRR
CLK
NC
XLT
DATA
COUT
NC
DVDD
NC
SENS
SCLK
NC
DIRC

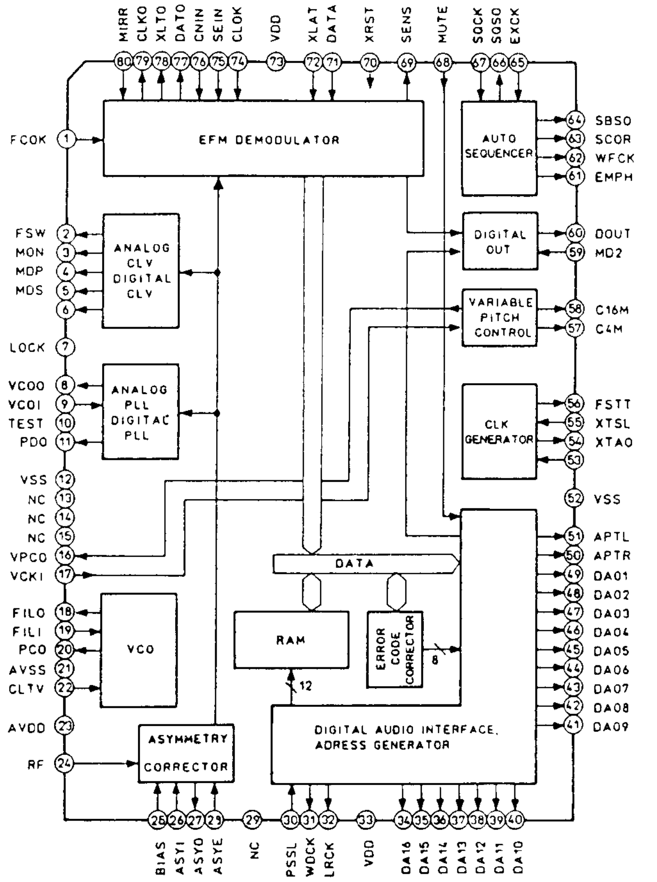
IC201 M5293L


GND
2
5k
27k
REFERENCE VOLTAGE
5
OUT
3
ON/OFF
4
REFERENCE VOLTAGE
OVERHEAT PROTECTION
OVERCURRENT LIMITTER
IN
1

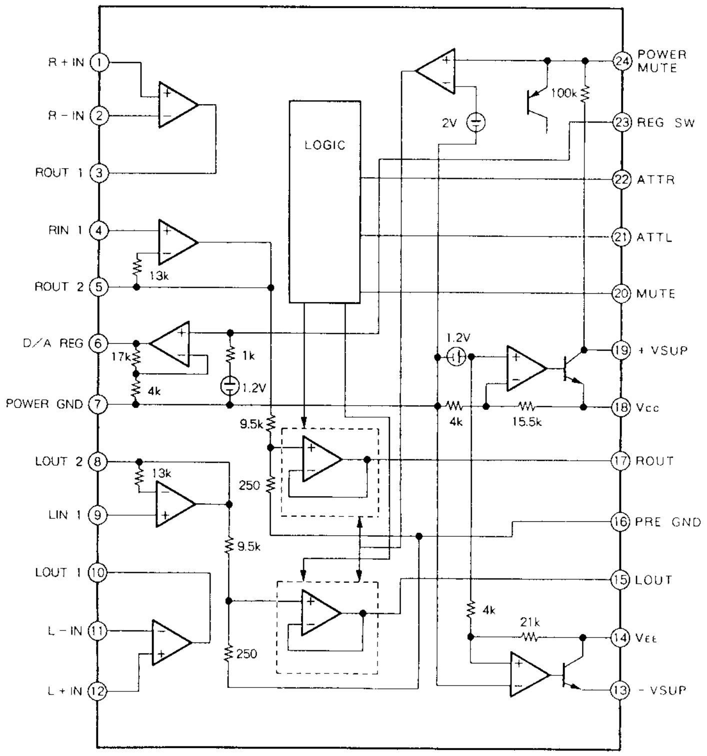
IC202 LA5602


V IN
1
REFERENCE VOLTAGE
ERROR AMP
OVER CURRENT LIMITTER
RESET GEN
OVER HEAT PROTECTION
10k
22k
ON/OFF
EN
2
7
V OUT
5
RES
4
GND
3
CDEL
6
CN

IC301 CXD2500AQ


MIRR
CLKO
XLTO
DATO
CNIN
SEIN
CLOK
VDD
XLAT
DATA
XRST
SENS
MUTE
SOCK
SOSO
EXCK
FCOK
EFM DEMODULATOR
AUTO SEQUENCER
SBSO
SCOR
WFCK
EMPH
FSW
MON
MDP
MDS
ANALOG CLV DIGITAL CLV
DIGITAL OUT
DOUT
MD2
VARIABLE PITCH CONTROL
C16M
C4M
LOCK
VCOO
VCOI
TEST
PDO
ANALOG PLL DIGITAC PLL
CLK GENERATOR
FSTT
XTSL
XTAO
VSS
NC
NC
NC
VPCO
VCKI
VSS
DATA
APTL
APTR
DA01
DA02
DA03
DA04
DA05
DA06
DA07
DA08
DA09
FILO
FILI
PCO
AVSS
CLTV
VCO
RAM
ERROR CODE CORRECTOR
8
12
AVDD
RF
ASYMMETRY CORRECTOR
DIGITAL AUDIO INTERFACE, ADRESS GENERATOR
BIAS
ASYI
ASYO
ASYE
NC
PSSL
WDCK
LRCK
VDD
DA16
DA15
DA14
DA13
DA12
DA11
DA10

IC306 LA9215

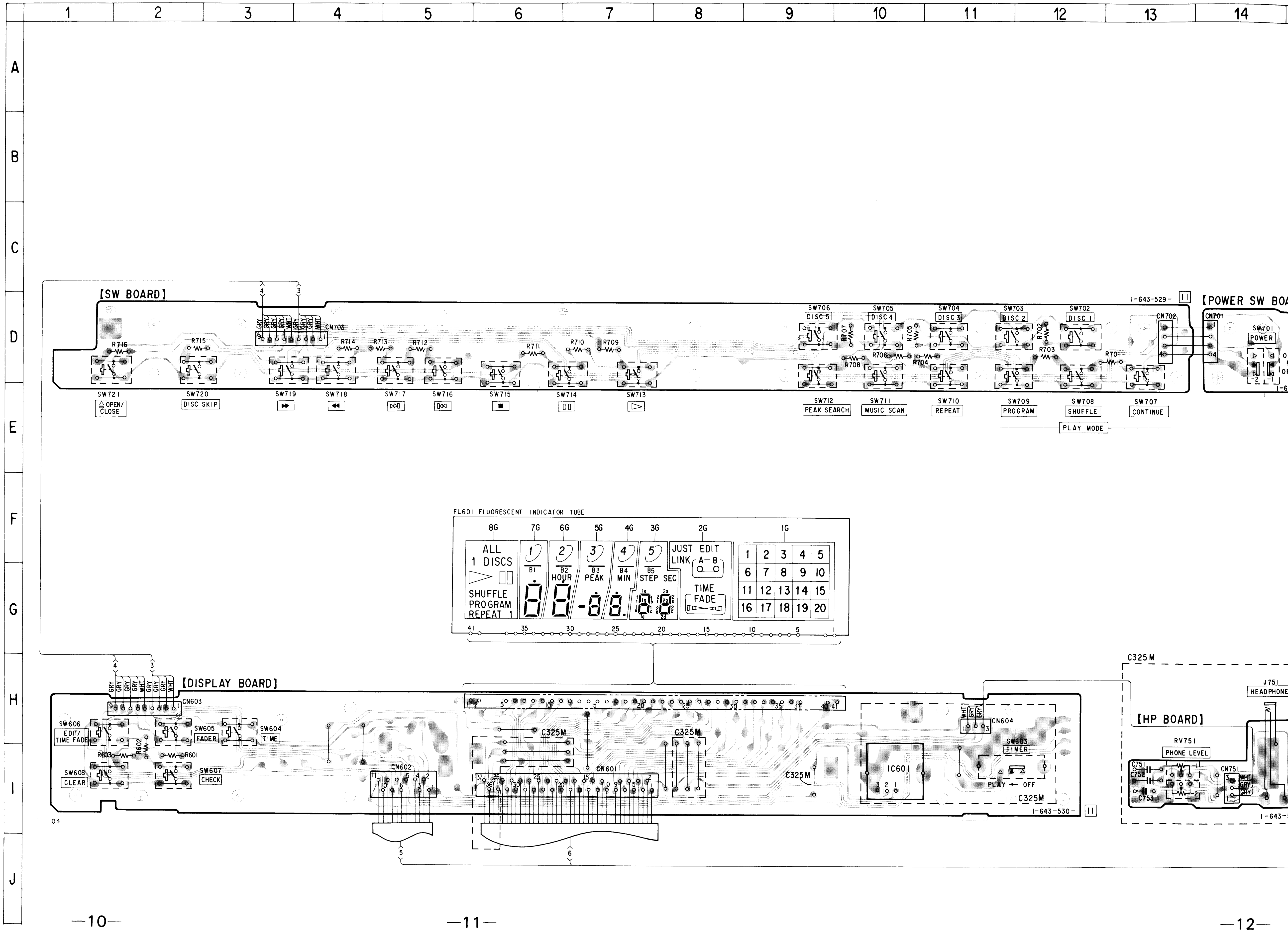

R + IN
R − IN
ROUT 1
RIN 1
13k
ROUT 2
D/A REG
17k
4k
1k
1.2V
POWER GND
LOUT 2
13k
LIN 1
LOUT 1
L − IN
L + IN
LOGIC
2V
100k
9.5k
250
9.5k
250
1.2V
4k
15.5k
4k
21k
POWER MUTE
REG SW
ATTR
ATTL
MUTE
+ VSUP
Vcc
ROUT
PRE GND
LOUT
VEE
− VSUP

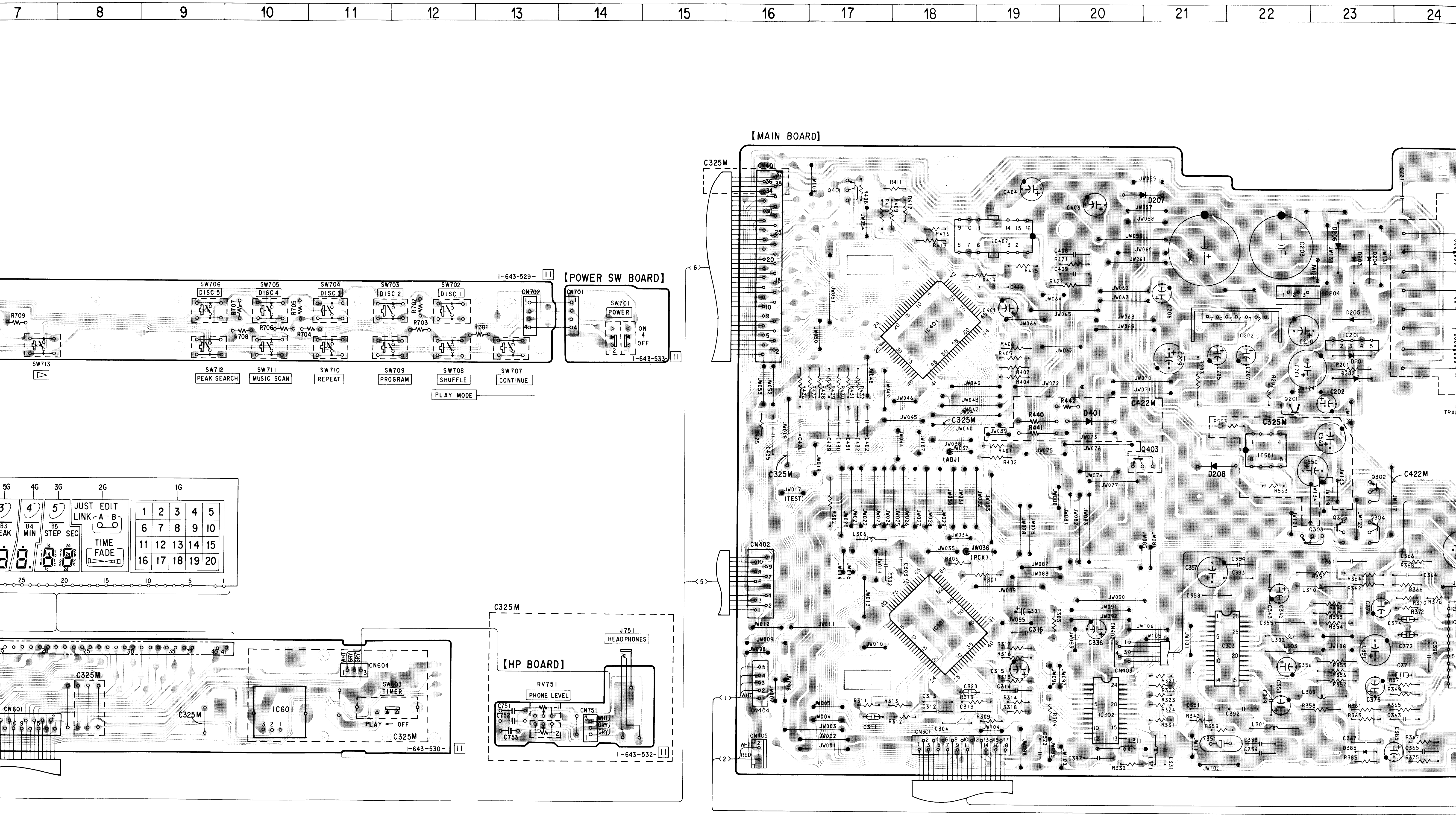
• Semiconductor Location

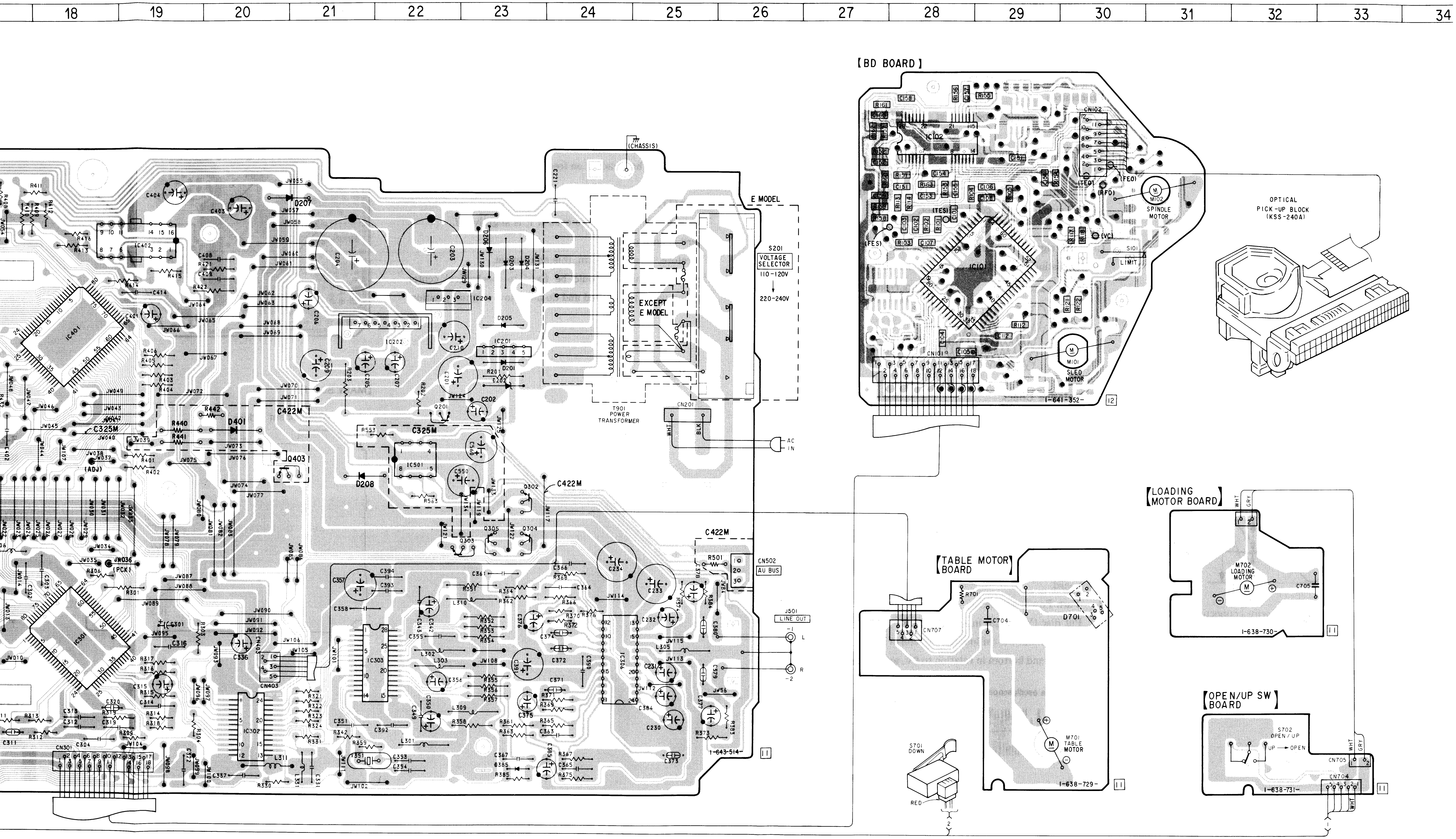
Ref. No.	Location
D201	D-23
D202	E-23
D203	C-23
D204	C-23
D205	D-23
D206	C-23
D207	C-20
D208	F-21
D385	I-23
D401	E-20
D701	G-30
IC101	C-28
IC102	B-28
IC201	D-23
IC202	D-22
IC204	D-22
IC301	H-18
IC302	I-20
IC303	H-21
IC306	H-24
IC401	D-18
IC402	C-19
IC501	F-22
IC601	I-10
Q201	E-22
Q302	F-23
Q303	G-22
Q304	G-23
Q305	G-23
Q401	C-17
Q403	F-20

Note:
- ○—— : parts extracted from the component side.
- ● : Through hole.
- ░ : Pattern on the side which is seen.
- ⋯ : Pattern of the rear side.

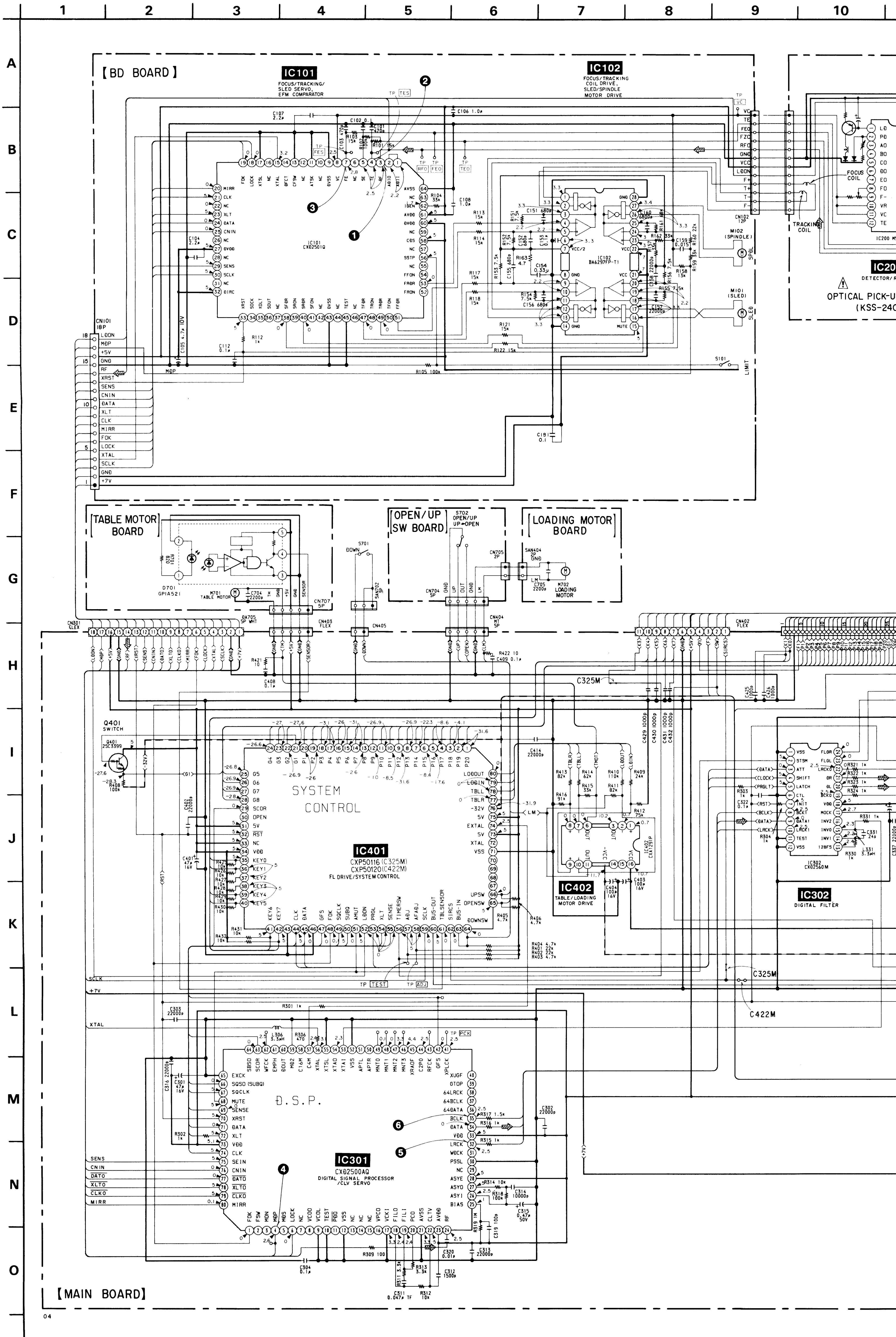
3-3. PRINTED WIRING BOARDS • Refer to page 7 for Semiconductor Lead Layouts.


1 2 3 4 5 6 7 8 9 10 11 12 13 14
A B C D E F G H I J
[SW BOARD]
1-643-529- 11
[POWER SW BOA
CN703
CN702
CN701
SW701 POWER
R716 R715 R714 R713 R712 R711 R710 R709
R707 R705 R702 R703 R701 R706 R704 R708
SW706 DISC 5
SW705 DISC 4
SW704 DISC 3
SW703 DISC 2
SW702 DISC 1
SW721 ⏏ OPEN/CLOSE
SW720 DISC SKIP
SW719 ▶▶
SW718 ◀◀
SW717 ▷▷|
SW716 |◁◁
SW715 ■
SW714 ▯▯
SW713 ▷
SW712 PEAK SEARCH
SW711 MUSIC SCAN
SW710 REPEAT
SW709 PROGRAM
SW708 SHUFFLE
SW707 CONTINUE
PLAY MODE
GRY GRY GRY GRY WHT GRY GRY GRY WHT
4 3
FL601 FLUORESCENT INDICATOR TUBE
8G 7G 6G 5G 4G 3G 2G 1G
ALL 1 DISCS
SHUFFLE PROGRAM REPEAT 1
B1 B2 HOUR B3 PEAK B4 MIN B5 STEP SEC
JUST EDIT LINK A–B
TIME FADE
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
41 35 30 25 20 15 10 5 1
[DISPLAY BOARD]
CN603
SW606 EDIT/TIME FADE
SW605 FADER
SW604 TIME
R603 R602 R601
SW608 CLEAR
SW607 CHECK
CN602
CN601
C325M
IC601
CN604
SW603 TIMER
PLAY ← OFF
1-643-530- 11
04
5 6
C325M
J751 HEADPHONE
[HP BOARD]
RV751 PHONE LEVEL
C751 C752 C753
CN751
WHT GRY GRY
1-643-

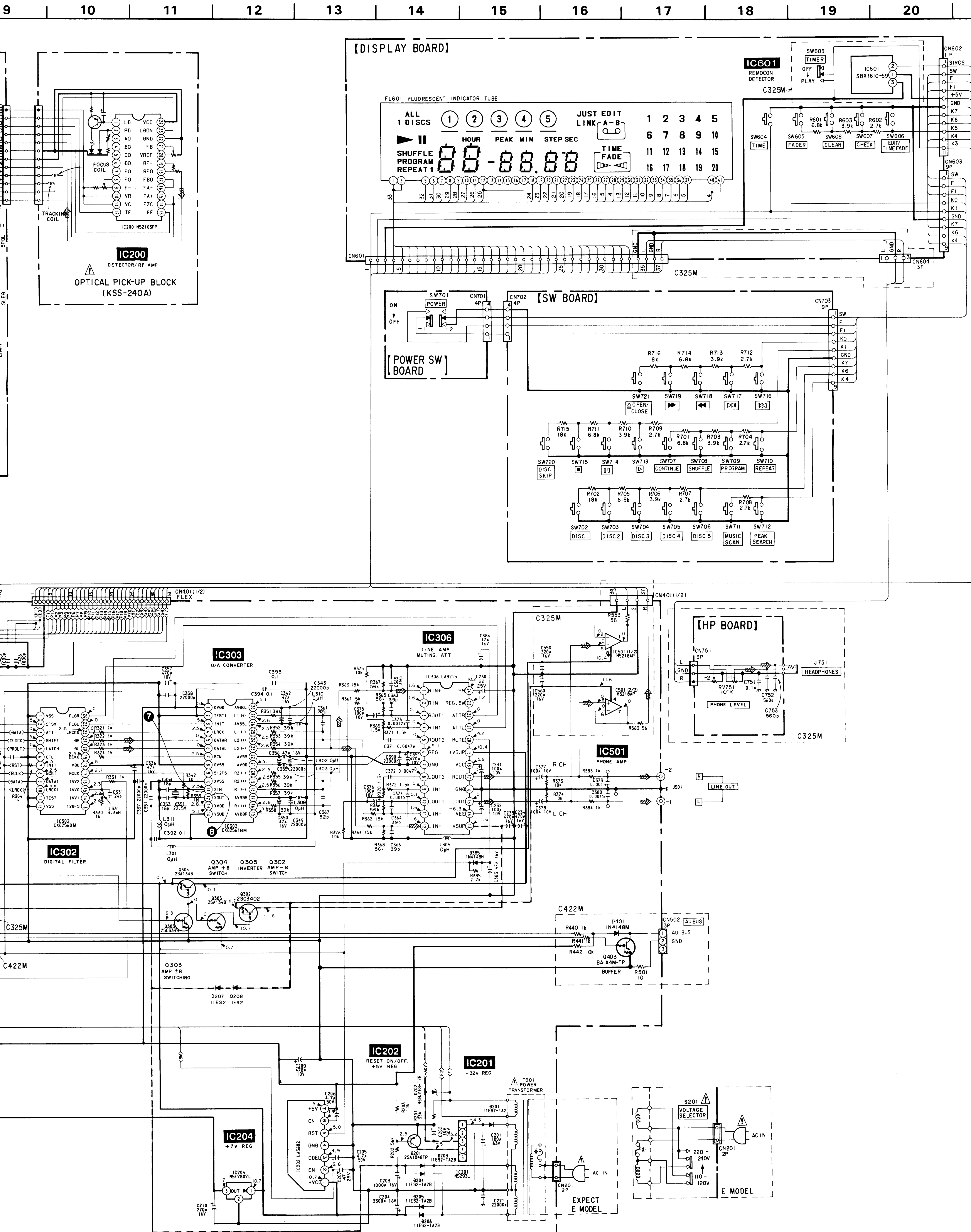

7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
【MAIN BOARD】
【POWER SW BOARD】
【HP BOARD】
1-643-529- 11
1-643-533- 11
1-643-530- 11
1-643-532- 11
SW706 DISC 5
SW705 DISC 4
SW704 DISC 3
SW703 DISC 2
SW702 DISC 1
SW701 POWER
ON OFF
SW713
SW712 PEAK SEARCH
SW711 MUSIC SCAN
SW710 REPEAT
SW709 PROGRAM
SW708 SHUFFLE
SW707 CONTINUE
PLAY MODE
CN701
CN702
JUST EDIT LINK A-B
TIME FADE
STEP SEC
MIN
CN601
CN604
SW603 TIMER
PLAY ← OFF
IC601
C325M
C422M
RV751 PHONE LEVEL
J751 HEADPHONES
CN751
CN401
CN402
CN403
CN404
CN405
CN301
IC401
IC402
IC301
IC302
IC303
IC501
IC201
IC202
IC204
JW017 (TEST)
JW036 (PCK)
JW038 (ADJ)
D401
D207
D208
Q401
Q403
WHT
RED
GRY

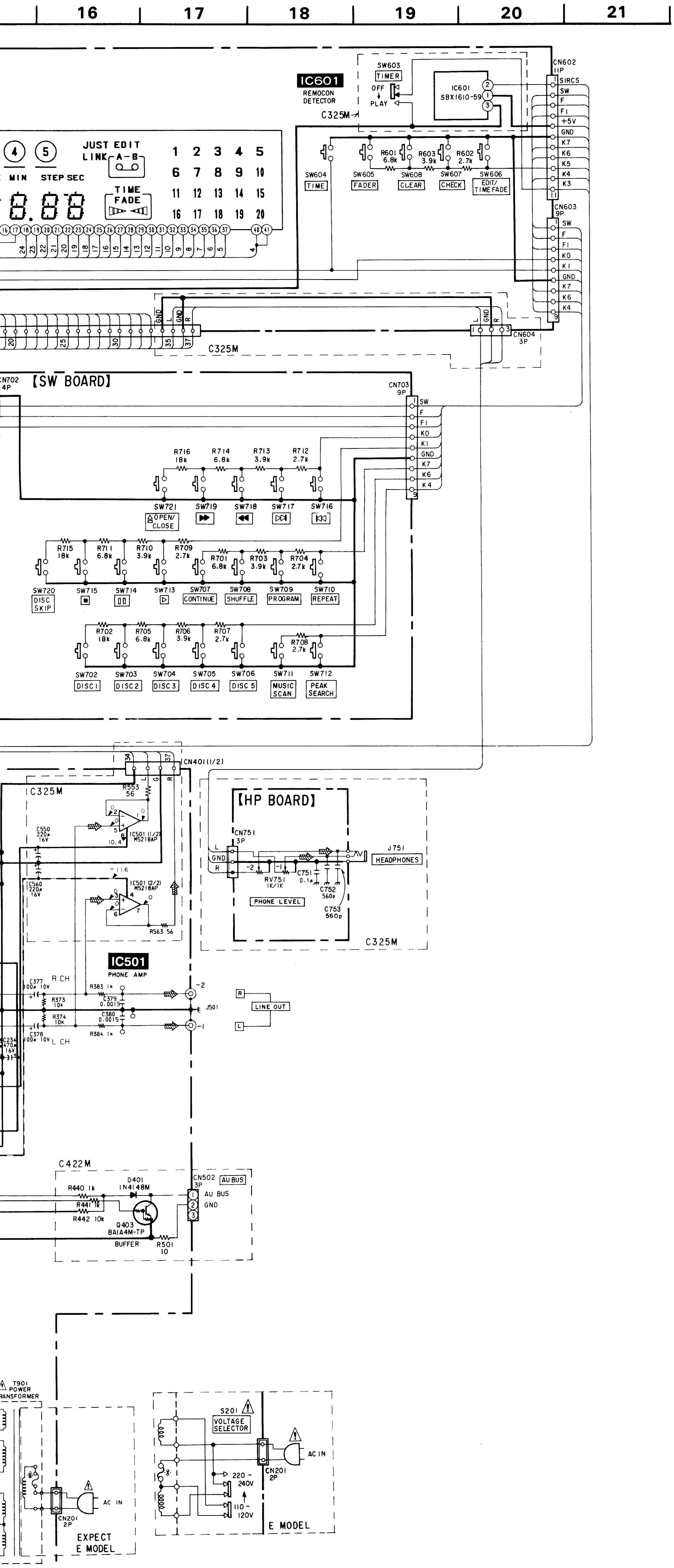

18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
【BD BOARD】
IC101
IC102
CN101
CN102
M102 SPINDLE MOTOR
M101 SLED MOTOR
S101 LIMIT
(FES)
(TES)
(TEO)
(FEO)
(RFO)
(VC)
1-641-352-
12
OPTICAL PICK-UP BLOCK (KSS-240A)
(CHASSIS)
E MODEL
S201 VOLTAGE SELECTOR 110-120V ↓ 220-240V
EXCEPT E MODEL
T901 POWER TRANSFORMER
CN201
WHT
BLK
AC IN
IC401
IC402
IC301
IC302
IC303
IC304
IC201
IC202
IC204
IC501
C422M
C325M
D401
D207
D208
Q403
Q201
Q302
Q303
Q304
Q305
(ADJ)
(PCK)
CN301
CN403
CN502 AU BUS
J501 LINE OUT
L
R
1-643-514-
11
【TABLE MOTOR BOARD】
CN707
D701
M701 TABLE MOTOR
1-638-729-
11
S701 DOWN
RED
【LOADING MOTOR BOARD】
M702 LOADING MOTOR
WHT
GRY
1-638-730-
11
【OPEN/UP SW BOARD】
S702 OPEN/UP
UP → OPEN
CN705
CN704
1-638-731-
11

3-4. SCHEMATIC DIAGRAM • Refer to page 8 for IC Block Diagrams.



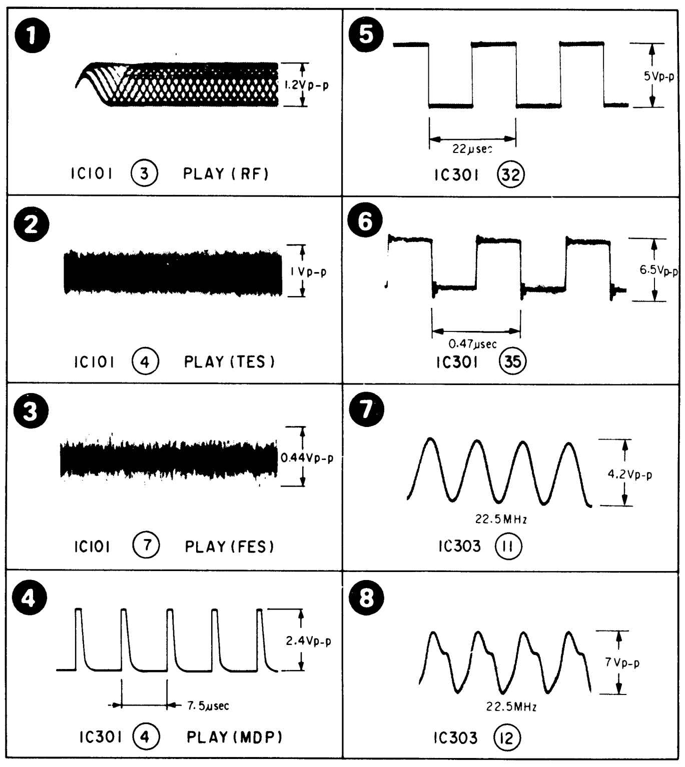
[BD BOARD]
IC101
FOCUS/TRACKING/ SLED SERVO, EFM COMPARATOR
IC101 CXD2501Q
IC102
FOCUS/TRACKING COIL DRIVE, SLED/SPINDLE MOTOR DRIVE
IC102 BA6297FP-T1
M102 (SPINDLE)
M101 (SLED)
S101 LIMIT
CN101 18P
CN102 12P
FOCUS COIL
TRACKING COIL
IC200
DETECTOR/
OPTICAL PICK-U
(KSS-240
[TABLE MOTOR BOARD]
D701 GP1A521
M701 TABLE MOTOR
CN707 5P
[OPEN/UP SW BOARD]
S702 OPEN/UP UP→OPEN
S701 DOWN
CN704 5P
CN705 2P
[LOADING MOTOR BOARD]
M702 LOADING MOTOR
CN301 FLEX
CN403 FLEX
CN405
CN404 MT 5P
CN402 FLEX
Q401 SWITCH
Q401 2SC3399
SYSTEM CONTROL
IC401
CXP50116 (C325M)
CXP50120 (C422M)
FL DRIVE/SYSTEM CONTROL
IC402
TABLE/LOADING MOTOR DRIVE
IC302 CXD2560M
IC302
DIGITAL FILTER
C325M
C422M
D.S.P.
IC301
CXD2500AQ
DIGITAL SIGNAL PROCESSOR /CLV SERVO
TP TEST
TP ADJ
TP PCK
[MAIN BOARD]
1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P


9
10
11
12
13
14
15
16
17
18
19
20
IC200
DETECTOR/RF AMP
OPTICAL PICK-UP BLOCK
(KSS-240A)
FOCUS COIL
TRACKING COIL
IC200 M52103FP
[DISPLAY BOARD]
FL601 FLUORESCENT INDICATOR TUBE
ALL
1 DISCS
HOUR
PEAK
MIN
STEP SEC
SHUFFLE
PROGRAM
REPEAT 1
JUST EDIT
LINK A-B
TIME FADE
IC601
REMOCON DETECTOR
IC601 SBX1610-59
SW603 TIMER
OFF
PLAY
C325M
SW604 TIME
SW605 FADER
SW608 CLEAR
SW607 CHECK
SW606 EDIT/TIME FADE
CN602 11P
CN603 9P
CN601
CN604 3P
SW701 POWER
ON
OFF
CN701 4P
CN702 4P
[POWER SW BOARD]
[SW BOARD]
CN703 9P
SW721 OPEN/CLOSE
SW719
SW718
SW717
SW716
SW720 DISC SKIP
SW715
SW714
SW713
SW707 CONTINUE
SW708 SHUFFLE
SW709 PROGRAM
SW710 REPEAT
SW702 DISC1
SW703 DISC2
SW704 DISC3
SW705 DISC4
SW706 DISC5
SW711 MUSIC SCAN
SW712 PEAK SEARCH
CN401(1/2) FLEX
CN401(1/2)
IC303
D/A CONVERTER
IC303 CXD2561BM
IC302
DIGITAL FILTER
IC302 CXD2560M
IC306
LINE AMP MUTING, ATT
IC306 LA9215
IC501
PHONE AMP
IC501 (1/2) M5218AP
IC501 (2/2) M5218AP
[HP BOARD]
CN751 3P
RV751 1K/1K
PHONE LEVEL
J751 HEADPHONES
R CH
L CH
J501
LINE OUT
Q304 AMP +B SWITCH
Q305 INVERTER
Q302 AMP -B SWITCH
Q303 AMP ±B SWITCHING
D207 D208 11ES2 11ES2
C422M
CN502 3P
AU BUS
GND
D401 1N4148M
Q403 BA1A4M-TP BUFFER
IC202
RESET ON/OFF, +5V REG
IC202 LA5602
IC201
-32V REG
IC201 M5293L
IC204
+7V REG
IC204 M5F7807L
T901 POWER TRANSFORMER
CN201 2P
AC IN
EXPECT E MODEL
S201 VOLTAGE SELECTOR
220 - 240V
110 - 120V
E MODEL
✽ NOT REPLACEABLE : BUILT IN TRANSFORMER


16
17
18
19
20
21
IC601
REMOCON DETECTOR
SW603 TIMER
OFF
PLAY
IC601 SBX1610-59
C325M
CN602 11P
SIRCS
SW
F
FI
+5V
GND
K7
K6
K5
K4
K3
CN603 9P
KO
KI
JUST EDIT
LINK A–B
MIN
STEP SEC
TIME FADE
1 2 3 4 5
6 7 8 9 10
11 12 13 14 15
16 17 18 19 20
SW604 TIME
SW605 FADER
SW608 CLEAR
SW607 CHECK
SW606 EDIT/TIME FADE
R601 6.8k
R603 3.9k
R602 2.7k
CN604 3P
[SW BOARD]
CN702 4P
CN703 9P
R716 18k
R714 6.8k
R713 3.9k
R712 2.7k
SW721 OPEN/CLOSE
SW719
SW718
SW717
SW716
R715 18k
R711 6.8k
R710 3.9k
R709 2.7k
R701 6.8k
R703 3.9k
R704 2.7k
SW720 DISC SKIP
SW715
SW714
SW713
SW707 CONTINUE
SW708 SHUFFLE
SW709 PROGRAM
SW710 REPEAT
R702 18k
R705 6.8k
R706 3.9k
R707 2.7k
R708 2.7k
SW702 DISC1
SW703 DISC2
SW704 DISC3
SW705 DISC4
SW706 DISC5
SW711 MUSIC SCAN
SW712 PEAK SEARCH
CN401 (1/2)
C325M
R553 56
C550 220μ 16V
C560 220μ 16V
IC501 (1/2) M5218AP
IC501 (2/2) M5218AP
R563 56
IC501
PHONE AMP
[HP BOARD]
CN751 3P
RV751 1K/1K
PHONE LEVEL
C751 0.1μ
C752 560p
C753 560p
J751 HEADPHONES
C325M
R CH
L CH
C377 100μ 10V
R373 10k
R374 10k
C378 100μ 10V
R383 1k
R384 1k
C379 0.0015
C380 0.0015
J501
LINE OUT
R
L
C422M
D401 1N4148M
R440 1k
R441 1k
R442 10k
Q403 BA1A4M-TP
BUFFER
R501 10
CN502 3P
AU BUS
GND
T901 POWER TRANSFORMER
CN201 2P
AC IN
EXPECT E MODEL
S201 VOLTAGE SELECTOR
220 - 240V
110 - 120V
E MODEL

✻ NOT REPLACEABLE : BUILT IN TRANSFORMER

• Waveforms



Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

- ▬ : B+ Line
- ▬ ▬ : B– Line
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- Voltages are taken with a VOM (Input Impedance 10MΩ) Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD

SECTION 4
EXPLODED VIEWS

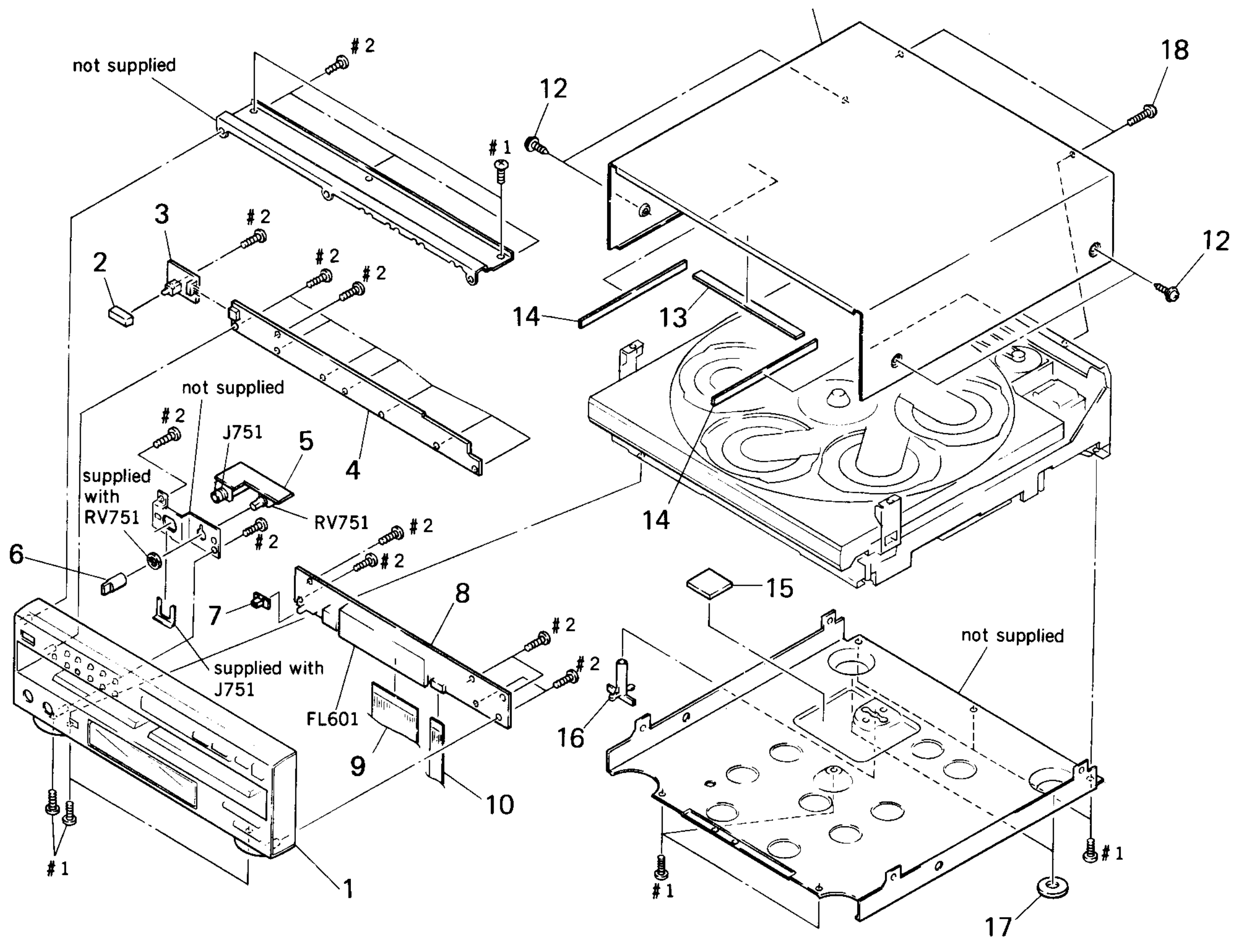
NOTE :

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE)...(RED)
  ↑ Parts Color ↑ Cabinet's Color
- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- AUS : Australian model

4-1. CABINET ASSEMBLY

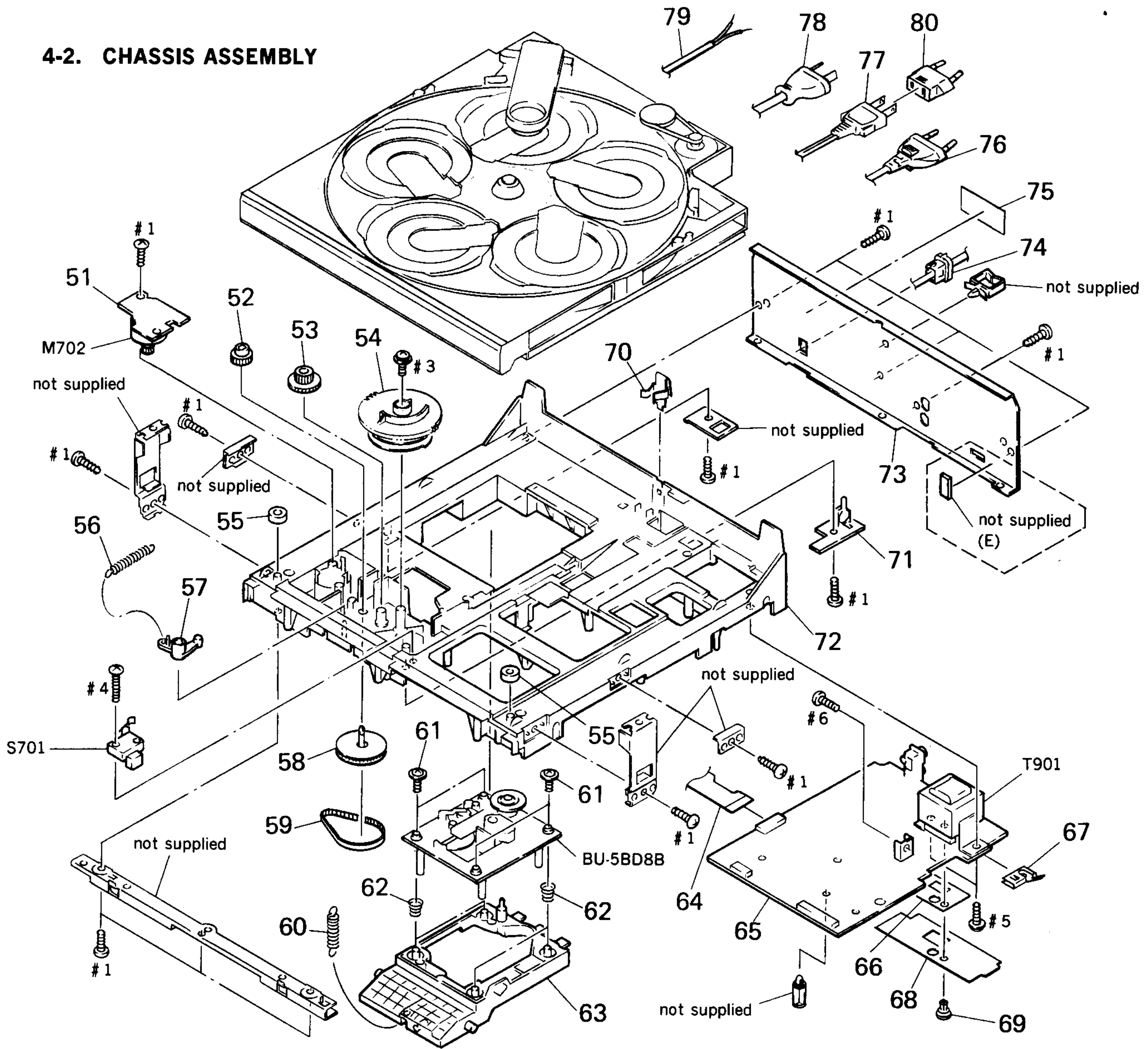


not supplied
#2
#1
12
11
18
12
3
#2
2
#2
#2
14
13
not supplied
#2
J751
5
4
supplied with RV751
RV751
#2
#2
6
#2
7
8
14
15
not supplied
#2
#2
supplied with J751
FL601
9
10
16
#1
#1
#1
1
17

Ref. No.	Part No.	Description	Remark
1	X-4942-549-1	PANEL ASSY. FRONT (C325M)	
1	X-4942-550-1	PANEL ASSY. FRONT (C422M)	
2	4-951-115-01	BUTTON (POWER) (C325M)	
2	4-951-115-11	BUTTON (POWER) (C422M)	
* 3	1-643-533-11	POWER SW BOARD	
* 4	1-643-529-11	SW BOARD	
* 5	1-643-532-11	HP BOARD (C325M)	
6	4-922-531-11	KNOB (A TYPE). LOV (C325M)	
7	4-922-518-01	KNOB (TIMER) (C325M)	
* 8	1-643-530-11	DISPLAY BOARD	
9	1-690-847-11	WIRE (FLAT TYPE) (37 CORE) (C325M)	
9	1-690-848-11	WIRE (FLAT TYPE) (33 CORE) (C422M)	
10	1-690-849-11	WIRE (FLAT TYPE) (11 CORE)	

Ref. No.	Part No.	Description	Remark
* 11	4-943-992-01	CASE (C325M)	
* 11	4-943-992-11	CASE (C422M)	
12	3-704-366-01	SCREW (CASE) (M3X8)	
* 13	4-929-557-01	CUSHION (PANEL)	
* 14	4-929-561-01	CUSHION (CASE) (C325M)	
* 15	4-951-946-01	SHEET	
16	4-937-945-01	PLATE (TRANSPORT). LOCK	
17	4-924-410-01	FELT	
18	3-703-685-21	SCREW (+BV 3X8)	
FL601	1-519-721-11	INDICATOR TUBE. FLUORESCENT	
J751	1-691-878-11	JACK (LARGE TYPE) (HEAD PHONES) (C325M)	
RV751	1-241-031-11	RES. VAR. CARBON 1K/1K (PHONE LEVEL) (C325M)	

4-2. CHASSIS ASSEMBLY



79
78
80
77
76
75
#1
74
not supplied
#1
51
52
53
54
#3
M702
70
not supplied
not supplied
#1
#1
not supplied
#1
73
#1
not supplied (E)
56
55
71
57
#1
72
#4
not supplied
#6
S701
58
61
55
61
T901
#1
59
not supplied
BU-5BD8B
#1
67
62
64
62
#5
60
65
#1
66
63
not supplied
68
69

Note : The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
* 51	1-638-730-11	LOARDING MOTOR BOARD	
52	4-934-375-01	GEAR (LOADING B)	
53	4-934-381-01	GEAR (LOADING C)	
54	4-934-391-01	GEAR (LOADING A)	
* 55	4-951-619-01	CUSHION (A)	
56	4-924-412-01	SPRING (B). TENSION	
57	4-917-519-01	LEVER. SET	
58	X-4941-529-1	PULLEY ASSY	
59	4-944-490-01	BELT (TIMING)	
60	4-937-911-01	SPRING. TENSION	
61	4-933-134-01	SCREW (+PTPWH M2.6X6)	
62	4-949-385-01	SPRING (D). COIL	
* 63	4-934-373-01	BRACKET (BU)	
64	1-694-003-11	JAMPER. FILM (WITH TARMINAL)	
* 65	A-4649-200-A	MAIN BOARD. COMPLETE (C422M:AEP. UK. AUS)	
* 65	A-4649-208-A	MAIN BOARD. COMPLETE (C422M:E)	
* 65	A-4649-209-A	MAIN BOARD. COMPLETE (C325M:AEP. UK. AUS)	
* 65	A-4649-213-A	MAIN BOARD. COMPLETE (C325M:E)	
* 66	4-951-933-01	SHEET. INSULATING (C325M:AEP. UK. AUS)	
* 67	4-944-581-01	PLATE. GROUND	
* 68	4-944-178-01	SHEET (INSULATING)	
69	3-531-576-11	RIVET	
* 70	4-943-996-01	SPRING. LEAF	

Ref. No.	Part No.	Description	Remark
* 71	1-638-731-11	OPEN/UP SW BOARD	
* 72	4-943-997-01	CHASSIS	
* 73	4-949-862-01	PANEL. BACK (C325M:AEP)	
* 73	4-949-862-11	PANEL. BACK (C325M:UK. AUS)	
* 73	4-949-862-21	PANEL. BACK (C325M:E)	
* 73	4-949-862-31	PANEL. BACK (C422M:AEP)	
* 73	4-949-862-41	PANEL. BACK (C422M:UK. AUS)	
* 73	4-949-862-51	PANEL. BACK (C422M:E)	
* 74	3-703-244-00	BUSHING (2104). CORD (AEP. UK. AUS)	
* 74	3-703-571-11	BUSHING (S) (4516). CORD (E)	
* 75	4-941-548-01	LABEL. CLASS 1	
⚠76	1-575-651-21	CORD. POWER (AEP)	
⚠77	1-575-653-21	CORD. POWER (E)	
⚠78	1-574-358-11	CORD. POWER (WITH CONNECTOR) (C422M:AUS)	
⚠78	1-574-358-31	CORD. POWER (WITH CONNECTOR) (C325M:AUS)	
⚠79	1-558-946-21	CORD. POWER (C325M:UK)	
⚠79	1-590-379-11	CORD. POWER (C422M:UK)	
⚠80	1-569-007-11	ADAPTER. CONVERSION 2P (C325M:E)	
M702	A-4604-834-A	MOTOR ASSY. LOADING	
S701	1-572-713-11	SWITCH. PUSH (WITH CONNECTOR) (DOWN)	
⚠T901	1-449-955-11	TRANSFORMER. POWER (EXCEPT E)	
⚠T901	1-449-956-11	TRANSFORMER. POWER (E)	

4-3. TRAY

Ref. No.	Part No.
101	4-926-38
* 102	4-926-38
* 103	4-949-22
* 104	4-930-50
105	4-926-39
* 106	1-452-53
* 107	4-926-38
108	4-923-59

75
74
not supplied
#1
supplied
T901
67
69

otted line

Remark

UK, AUS)
(E)

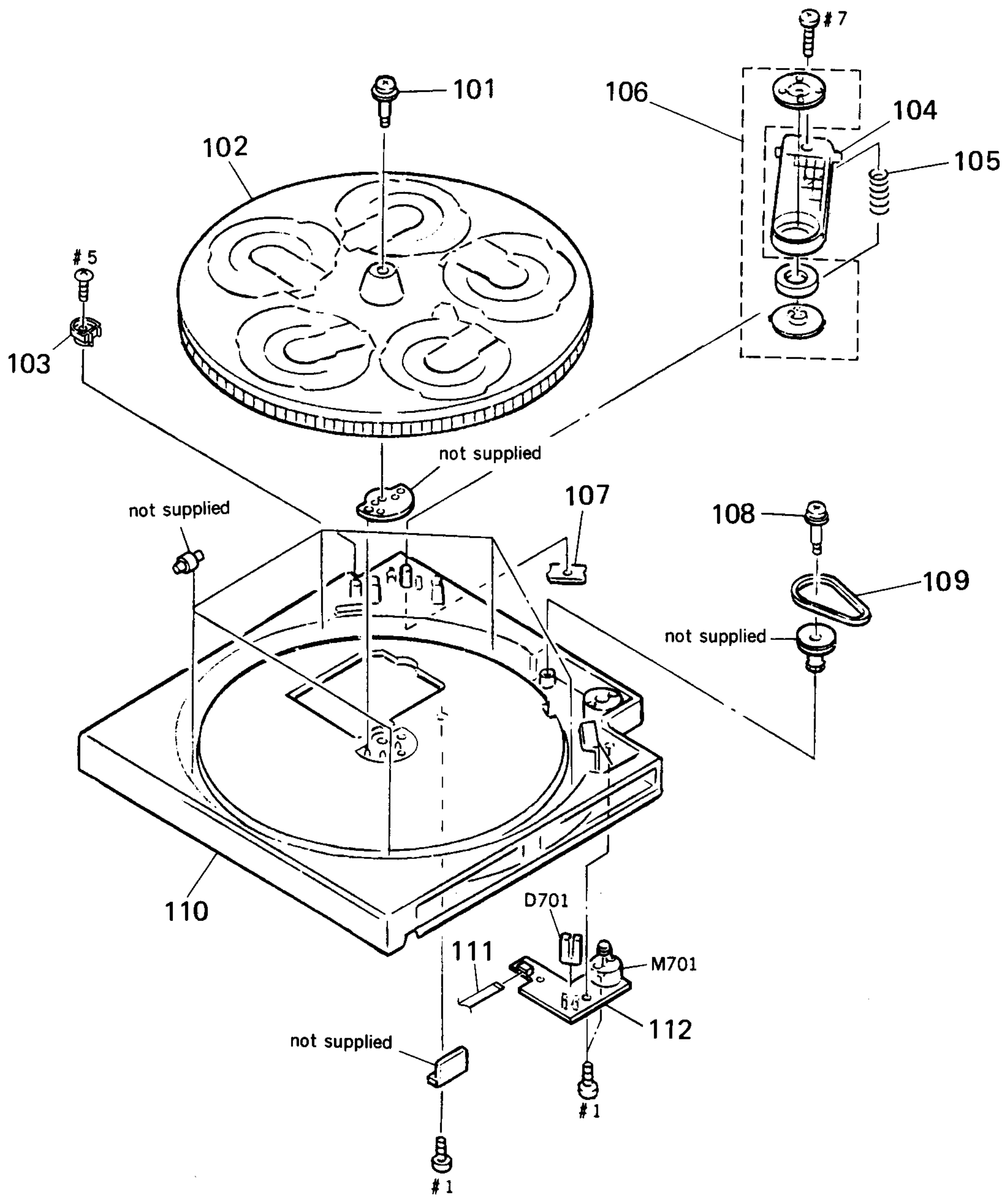
OR) (C422M:AUS)
OR) (C325M:AUS)

325M:E)

TOR) (DOWN)

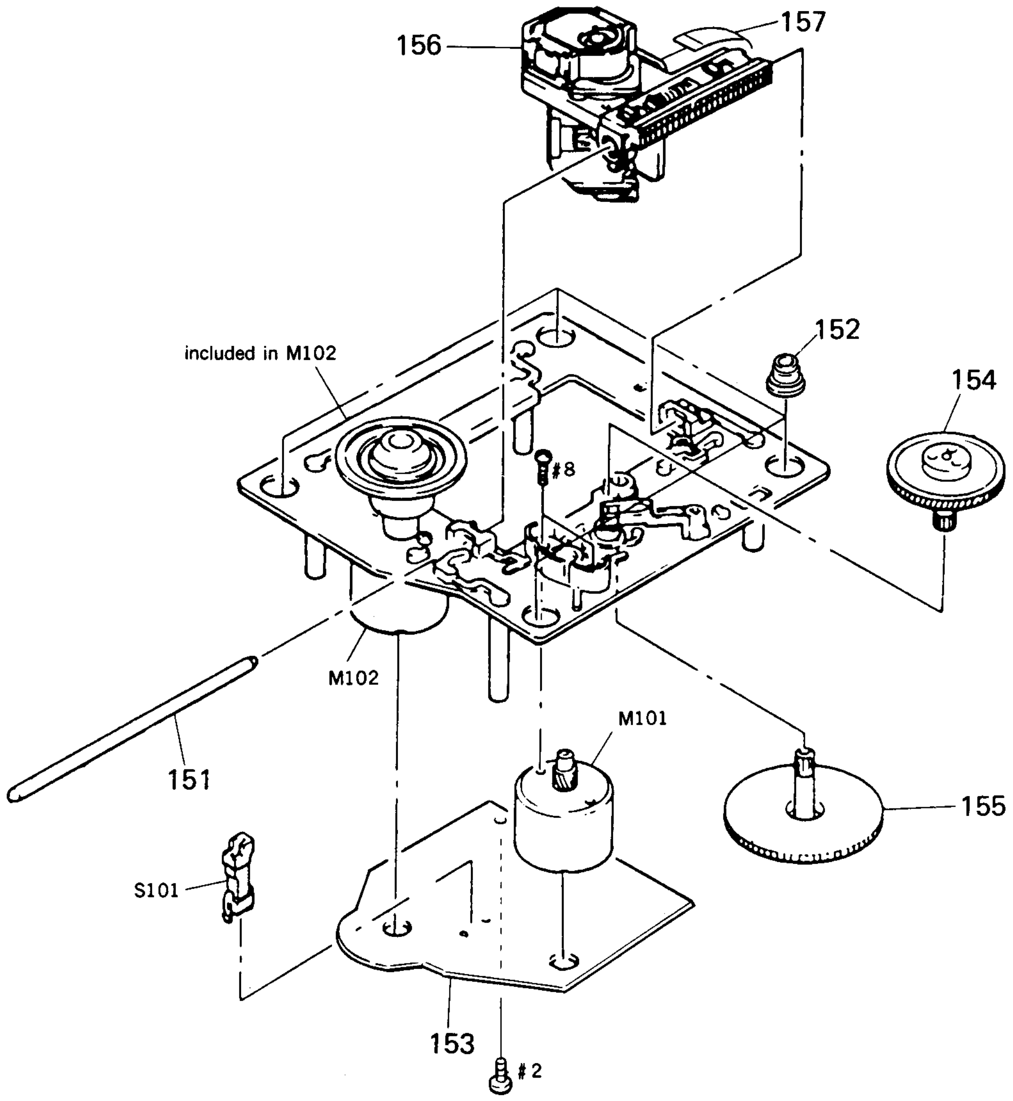
T E)

4-3. TRAY ASSEMBLY


#7
101
106
104
105
102
#5
103
not supplied
107
not supplied
108
109
not supplied
110
D701
111
M701
112
not supplied
#1
#1

Ref. No.	Part No.	Description	Remark
101	4-926-384-01	SCREW, STEP	
* 102	4-926-383-01	TABLE (B), DISK	
* 103	4-949-226-01	PLATE, LOCK	
* 104	4-930-506-02	BRACKET (PRESS PULLEY)	
105	4-926-395-01	SPRING, COMPRESSION	
* 106	1-452-538-11	MAGNET	
* 107	4-926-388-01	BRACKET (ADJUSTMENT)	
108	4-923-597-01	SCREW, STEP	
109	4-926-399-01	BELT	
110	4-951-121-01	TABLE (A), DISK (C325M)	
* 110	4-951-121-11	TABLE (A), DISK (C422M)	
111	1-590-849-11	WIRE, FLAT TYPE (5 CORE)	
* 112	1-638-729-11	TABLE MOTOR BOARD	
D701	8-719-970-19	DIODE GP1A521	
M701	A-4604-585-A	MOTOR ASSY, ROTARY	

4-4. OPTICAL PICK-UP BLOCK (BU-5BD8)


156
157
included in M102
152
154
#8
M102
151
M101
155
S101
153
#2

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
151	4-917-565-01	SHAFT, SLED	
152	4-951-940-01	INSULATOR (BU)	
* 153	A-4649-199-A	BD BOARD, COMPLETE	
154	4-917-567-01	GEAR (M)	
155	4-917-564-01	GEAR (P), FLATNESS	
⚠156	8-848-144-11	DEVICE, OPTICAL KSS-240A	
157	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
M101	X-4917-504-1	MOTOR ASSY, SLED	
M102	X-4917-523-3	MOTOR ASSY, SPINDLE	
S101	1-572-085-11	SWITCH, LEAF (LIMIT)	

SECTION 5
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS
  uF : μF
- RESISTORS
  All resistors are in ohms
  METAL : Metal-film resistor
  METAL OXIDE : Metal Oxide-film resistor
  F : nonflammable
- COILS
  uH : μH
- SEMICONDUCTORS
  In each case, u : μ, for example :
  uA... : μA..., uPA... : μPA...,
  uPB... : μPB..., uPC... : μPC...,
  uPD... : μPD....

When indicating parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- AUS : Australian Model

Ref. No.	Part No.	Description			Remark
*	A-4649-199-A	BD BOARD, COMPLETE			
		******************			
		< CAPACITOR >			
C101	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C102	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C103	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C104	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C105	1-135-155-21	TANTALUM CHIP	4.7uF	10%	16V
C106	1-164-346-11	CERAMIC CHIP	1uF		16V
C107	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C108	1-164-346-11	CERAMIC CHIP	1uF		16V
C112	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C151	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C152	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C153	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C154	1-164-336-11	CERAMIC CHIP	0.33uF		25V
C155	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C156	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C157	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C158	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C159	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C160	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C181	1-163-038-00	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
CN101	1-568-861-11	SOCKET, CONNECTOR 18P			
CN102	1-568-795-11	SOCKET, CONNECTOR 12P			
		< IC >			
IC101	8-752-344-48	IC CXD2501Q			
IC102	8-759-071-79	IC BA6297AFP			
		< RESISTOR >			
R101	1-216-077-00	METAL CHIP	15K	5%	1/10W
R102	1-216-097-00	METAL CHIP	100K	5%	1/10W
R103	1-216-077-00	METAL CHIP	15K	5%	1/10W
R104	1-216-085-00	METAL CHIP	33K	5%	1/10W
R105	1-216-097-00	METAL CHIP	100K	5%	1/10W
R112	1-216-049-00	METAL CHIP	1K	5%	1/10W
R113	1-216-077-00	METAL CHIP	15K	5%	1/10W
R114	1-216-077-00	METAL CHIP	15K	5%	1/10W
R117	1-216-077-00	METAL CHIP	15K	5%	1/10W
R118	1-216-077-00	METAL CHIP	15K	5%	1/10W
R121	1-216-077-00	METAL CHIP	15K	5%	1/10W
R122	1-216-077-00	METAL CHIP	15K	5%	1/10W
R151	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R152	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R153	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R154	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R155	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R156	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R157	1-216-085-00	METAL CHIP	33K	5%	1/10W
R158	1-216-076-00	METAL CHIP	13K	5%	1/10W
R159	1-216-085-00	METAL CHIP	33K	5%	1/10W
R160	1-216-081-00	METAL CHIP	22K	5%	1/10W
R161	1-216-093-00	METAL CHIP	68K	5%	1/10W
R162	1-216-085-00	METAL CHIP	33K	5%	1/10W
R163	1-216-308-00	METAL CHIP	4.7	5%	1/10W
		< SWITCH >			
S101	1-572-085-11	SWITCH, LEAF (LIMIT)			
**					
*	1-643-530-11	DISPLAY BOARD			
		*************			
*	1-643-533-11	POWER SW BOARD			
		**************			
*	1-643-529-11	SW BOARD			
		********			
		< CONNECTOR >			
* CN601	1-691-901-11	SOCKET, CONNECTOR (L TYPE) 33P (C422M)			
* CN601	1-691-902-11	SOCKET, CONNECTOR (L TYPE) 37P (C325M)			
* CN602	1-691-889-11	SOCKET, CONNECTOR (L TYPE) 11P			
* CN604	1-568-941-11	PIN, CONNECTOR 3P (C325M)			
* CN701	1-565-295-11	PLUG, CONNECTOR 4P			
* CN702	1-565-480-11	CONNECTOR, BOARD TO BOARD 4P			
* CN703	1-568-947-11	PIN, CONNECTOR 9P			

DISPLAY POWER SW SW HP LOADING MOTOR OPEN/UP SW TABLE MOTOR

Ref. No.	Part No.	Description	Remark
		< IC >	
IC601	8-741-100-48	IC SBX1610-59 (C325M)	
		< FLUORESCENT INDICATOR >	
FL601	1-519-721-11	INDICATOR TUBE, FLUORESCENT	
		< RESISTOR >	
R601	1-249-427-11	CARBON 6.8K 5% 1/4W	
R602	1-249-422-11	CARBON 2.7K 5% 1/4W	
R603	1-249-424-11	CARBON 3.9K 5% 1/4W	
R701	1-249-427-11	CARBON 6.8K 5% 1/4W	
R702	1-249-432-11	CARBON 18K 5% 1/4W	
R703	1-249-424-11	CARBON 3.9K 5% 1/4W	
R704	1-249-422-11	CARBON 2.7K 5% 1/4W	
R705	1-249-427-11	CARBON 6.8K 5% 1/4W	
R706	1-249-424-11	CARBON 3.9K 5% 1/4W	
R707	1-249-422-11	CARBON 2.7K 5% 1/4W	
R708	1-249-422-11	CARBON 2.7K 5% 1/4W	
R709	1-249-422-11	CARBON 2.7K 5% 1/4W	
R710	1-249-424-11	CARBON 3.9K 5% 1/4W	
R711	1-249-427-11	CARBON 6.8K 5% 1/4W	
R712	1-249-422-11	CARBON 2.7K 5% 1/4W	
R713	1-249-424-11	CARBON 3.9K 5% 1/4W	
R714	1-249-427-11	CARBON 6.8K 5% 1/4W	
R715	1-249-432-11	CARBON 18K 5% 1/4W	
R716	1-249-432-11	CARBON 18K 5% 1/4W	
		< SWITCH >	
SW603	1-570-157-51	SWITCH, SLIDE (TIMER) (C325M)	
SW604	1-554-303-21	SWITCH, TACTILE (TIME)	
SW605	1-554-303-21	SWITCH, TACTILE (FADER)	
SW606	1-554-303-21	SWITCH, TACTILE (EDIT/TIME FADE)	
SW607	1-554-303-21	SWITCH, TACTILE (CHECK)	
SW608	1-554-303-21	SWITCH, TACTILE (CLEAR)	
SW701	1-572-714-11	SWITCH, PUSH (POWER)	
SW702	1-554-303-21	SWITCH, TACTILE (DISC 1)	
SW703	1-554-303-21	SWITCH, TACTILE (DISC 2)	
SW704	1-554-303-21	SWITCH, TACTILE (DISC 3)	
SW705	1-554-303-21	SWITCH, TACTILE (DISC 4)	
SW706	1-554-303-21	SWITCH, TACTILE (DISC 5)	
SW707	1-554-303-21	SWITCH, TACTILE (CONTINUE)	
SW708	1-554-303-21	SWITCH, TACTILE (SHUFFLE)	
SW709	1-554-303-21	SWITCH, TACTILE (PROGRAM)	
SW710	1-554-303-21	SWITCH, TACTILE (REPEAT)	
SW711	1-554-303-21	SWITCH, TACTILE (MUSIC SCAN)	
SW712	1-554-303-21	SWITCH, TACTILE (PEAK SEARCH)	
SW713	1-554-303-21	SWITCH, TACTILE (▷)	
SW714	1-554-303-21	SWITCH, TACTILE (▯▯)	

Ref. No.	Part No.	Description	Remark
SW715	1-554-303-21	SWITCH, TACTILE (■)	
SW716	1-554-303-21	SWITCH, TACTILE (⏮)	
SW717	1-554-303-21	SWITCH, TACTILE (⏭)	
SW718	1-554-303-21	SWITCH, TACTILE (◀◀)	
SW719	1-554-303-21	SWITCH, TACTILE (▶▶)	
SW720	1-554-303-21	SWITCH, TACTILE (DISC SKIP)	
SW721	1-554-303-21	SWITCH, TACTILE (⏏OPEN/CLOSE)	
**			
*	1-643-532-11	HP BOARD (C325M) ****************	
		< CAPACITOR >	
C751	1-164-159-11	CERAMIC (C325M) 0.1uF 50V	
C752	1-162-291-31	CERAMIC (C325M) 560PF 10% 50V	
C753	1-162-291-31	CERAMIC (C325M) 560PF 10% 50V	
		< JACK >	
J751	1-691-878-11	JACK (LARGE TYPE) (HEADPHONES) (C325M)	
		< VARIABLE RESISTOR >	
RV751	1-241-031-11	RES, VAR, CARBON 1K/1K (PHONE LEVEL) (C325M)	
**			
*	1-638-730-11	LOADING MOTOR BOARD ******************	
*	1-638-731-11	OPEN/UP SW BOARD ****************	
*	1-638-729-11	TABLE MOTOR BOARD *****************	
		< CAPACITOR >	
C704	1-161-375-00	CERAMIC 0.0022uF 20% 50V	
C705	1-161-375-00	CERAMIC 0.0022uF 20% 50V	
		< CONNECTOR >	
* CN705	1-573-383-11	PIN, CONNECTOR (PC BOARD) 2P	
* CN707	1-573-044-11	SOCKET, CONNECTOR 5P	
		< DIODE >	
D701	8-719-970-19	DIODE GP1A521	
		< RESISTOR >	
R701	1-249-416-11	CARBON 820 5% 1/4W	

LOADING MOTOR | OPEN/UP SW | TABLE MOTOR | MAIN

Ref. No.	Part No.	Description			Remark
		< SWITCH >			
S702	1-571-300-21	SWITCH, ROTARY (OPEN/UP)			
************	************	************************************			
*	A-4649-200-A	MAIN BOARD, COMPLETE (C422M:AEP, UK, AUS)			
*	A-4649-208-A	MAIN BOARD, COMPLETE (C422M:E)			
*	A-4649-209-A	MAIN BOARD, COMPLETE (C325M:AEP, UK, AUS)			
*	A-4649-213-A	MAIN BOARD, COMPLETE (C325M:E)			
		************************************			
	7-682-548-04	SCREW +BVTT 3X8 (S)			
		< CAPACITOR >			
C201	1-124-572-11	ELECT	100uF	20%	63V
C202	1-126-059-11	ELECT	10uF	20%	50V
C203	1-124-360-00	ELECT	1000uF	20%	16V
C204	1-124-887-00	ELECT	3300uF	20%	16V
C205	1-126-163-11	ELECT	4.7uF	20%	50V
C206	1-126-163-11	ELECT	4.7uF	20%	50V
C207	1-124-910-11	ELECT	47uF	20%	50V
C209	1-124-997-11	ELECT	470uF	20%	10V
C210	1-126-024-11	ELECT	220uF	20%	16V
C221	1-161-494-00	CERAMIC	0.022uF		25V
C230	1-126-049-11	ELECT	22uF	20%	25V
C231	1-124-994-11	ELECT	100uF	20%	10V
C232	1-124-994-11	ELECT	100uF	20%	10V
C233	1-126-012-11	ELECT	470uF	20%	16V
C234	1-126-012-11	ELECT	470uF	20%	16V
C301	1-126-022-11	ELECT	47uF	20%	16V
C302	1-161-494-00	CERAMIC	0.022uF		25V
C303	1-161-494-00	CERAMIC	0.022uF		25V
C304	1-164-159-11	CERAMIC	0.1uF		50V
C311	1-130-491-00	MYLAR	0.047uF	5%	50V
C312	1-161-374-11	CERAMIC	0.0015uF	20%	50V
C313	1-161-494-00	CERAMIC	0.022uF		25V
C314	1-162-306-11	CERAMIC	0.01uF	20%	16V
C315	1-126-300-11	ELECT	0.47uF	20%	50V
C316	1-161-494-00	CERAMIC	0.022uF		25V
C319	1-162-282-31	CERAMIC	100PF	10%	50V
C320	1-130-483-00	MYLAR	0.01uF	5%	50V
C322	1-164-159-11	CERAMIC	0.1uF		50V
C331	1-162-208-31	CERAMIC	24PF	5%	50V
C336	1-126-022-11	ELECT	47uF	20%	16V
C337	1-161-494-00	CERAMIC	0.022uF		25V
C342	1-126-022-11	ELECT	47uF	20%	16V
C343	1-161-494-00	CERAMIC	0.022uF		25V
C349	1-161-494-00	CERAMIC	0.022uF		25V
C350	1-126-022-11	ELECT	47uF	20%	16V
C351	1-161-494-00	CERAMIC	0.022uF		25V
C353	1-162-205-31	CERAMIC	18PF	5%	50V
C354	1-162-205-31	CERAMIC	18PF	5%	50V
C355	1-161-494-00	CERAMIC	0.022uF		25V
C356	1-126-022-11	ELECT	47uF	20%	16V
C357	1-124-997-11	ELECT	470uF	20%	10V
C358	1-161-494-00	CERAMIC	0.022uF		25V
C361	1-162-280-31	CERAMIC	82PF	10%	50V
C363	1-162-213-31	CERAMIC	39PF	5%	50V
C364	1-162-213-31	CERAMIC	39PF	5%	50V
C365	1-162-213-31	CERAMIC	39PF	5%	50V
C366	1-162-213-31	CERAMIC	39PF	5%	50V
C367	1-162-280-31	CERAMIC	82PF	10%	50V
C371	1-130-479-00	MYLAR	0.0047uF	5%	50V
C372	1-130-479-00	MYLAR	0.0047uF	5%	50V
C373	1-130-472-00	MYLAR	0.0012uF	5%	50V
C374	1-130-472-00	MYLAR	0.0012uF	5%	50V
C375	1-124-994-11	ELECT	100uF	20%	10V
C376	1-124-994-11	ELECT	100uF	20%	10V
C377	1-124-994-11	ELECT	100uF	20%	10V
C378	1-124-994-11	ELECT	100uF	20%	10V
C379	1-130-473-00	MYLAR	0.0015uF	5%	50V
C380	1-130-473-00	MYLAR	0.0015uF	5%	50V
C384	1-126-022-11	ELECT	47uF	20%	16V
C385	1-126-022-11	ELECT	47uF	20%	16V
C390	1-161-494-00	CERAMIC	0.022uF		25V
C391	1-124-997-11	ELECT	470uF	20%	10V
C392	1-164-159-11	CERAMIC	0.1uF		50V
C393	1-164-159-11	CERAMIC	0.1uF		50V
C394	1-164-159-11	CERAMIC	0.1uF		50V
C401	1-126-022-11	ELECT	47uF	20%	16V
C402	1-161-494-00	CERAMIC	0.022uF		25V
C403	1-126-023-11	ELECT	100uF	20%	16V
C404	1-126-023-11	ELECT	100uF	20%	16V
C408	1-164-159-11	CERAMIC	0.1uF		50V
C409	1-164-159-11	CERAMIC	0.1uF		50V
C414	1-161-494-00	CERAMIC	0.022uF		25V
C425	1-162-294-31	CERAMIC	0.001uF	10%	50V
C426	1-162-294-31	CERAMIC	0.001uF	10%	50V
C429	1-162-294-31	CERAMIC	0.001uF	10%	50V
C430	1-162-294-31	CERAMIC	0.001uF	10%	50V
C431	1-162-294-31	CERAMIC	0.001uF	10%	50V
C432	1-162-294-31	CERAMIC	0.001uF	10%	50V
C550	1-126-024-11	ELECT (C325M)	220uF	20%	16V
C560	1-126-024-11	ELECT (C325M)	220uF	20%	16V
		< CONNECTOR >			
* CN201	1-573-047-11	PIN, CONNECTOR (PC BOARD) 2P			

MAIN

Ref. No.	Part No.	Description	Remark
* CN301	1-691-895-11	SOCKET, CONNECTOR (L TYPE) 18P	
* CN401	1-691-901-11	SOCKET, CONNECTOR (L TYPE) 33P	(C422M)
* CN401	1-691-902-11	SOCKET, CONNECTOR (L TYPE) 37P	(C325M)
* CN402	1-691-889-11	SOCKET, CONNECTOR (L TYPE) 11P	
* CN403	1-568-824-11	SOCKET, CONNECTOR 5P	
* CN404	1-568-943-11	PIN, CONNECTOR 5P	
* CN502	1-565-561-11	PIN, CONNECTOR 3P (AU BUS)	(C422M)
		< DIODE >	
D201	8-719-200-82	DIODE 11ES2	
D202	8-719-110-08	DIODE RD8.2ES-B2	
D203	8-719-200-82	DIODE 11ES2	
D204	8-719-200-82	DIODE 11ES2	
D205	8-719-200-82	DIODE 11ES2	
D206	8-719-200-82	DIODE 11ES2	
D207	8-719-200-82	DIODE 11ES2	
D208	8-719-200-82	DIODE 11ES2	
D385	8-719-987-63	DIODE 1N4148M	
D401	8-719-987-63	DIODE 1N4148M	(C422M)
		< IC >	
IC201	8-759-633-42	IC M5293L	
IC202	8-759-061-65	IC LA5602	
IC204	8-759-604-86	IC M5F7807L	
IC301	8-752-337-26	IC CXD2500AQ	
IC302	8-752-342-65	IC CXD2560M	
IC303	8-752-351-19	IC CXD2561BM	
IC306	8-759-061-66	IC LA9215	
IC401	8-752-837-03	IC CXP50120-020Q	(C422M)
IC401	8-752-837-01	IC CXP50116-287Q	(C325M)
IC402	8-759-821-32	IC CXA1291P	
IC501	8-759-634-51	IC M5218AP	(C325M)
		< JACK >	
J501	1-569-442-11	JACK, PIN 2P (LINE OUT)	
		< COIL >	
L301	1-412-473-21	INDUCTOR 0uH	
L302	1-412-473-21	INDUCTOR 0uH	
L303	1-412-473-21	INDUCTOR 0uH	
L305	1-412-473-21	INDUCTOR 0uH	
L306	1-412-297-11	INDUCTOR 3.3uH	
L309	1-412-473-21	INDUCTOR 0uH	
L310	1-412-473-21	INDUCTOR 0uH	
L311	1-412-473-21	INDUCTOR 0uH	
L331	1-412-297-11	INDUCTOR 3.3uH	

Ref. No.	Part No.	Description	Remark
		< TRANSISTOR >	
Q201	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q302	8-729-900-80	TRANSISTOR DTC114ES	
Q303	8-729-900-89	TRANSISTOR DTC144ES	
Q304	8-729-900-61	TRANSISTOR DTA114ES	
Q305	8-729-900-61	TRANSISTOR DTA114ES	
Q401	8-729-900-89	TRANSISTOR DTC144ES	
Q403	8-729-900-80	TRANSISTOR DTC114ES	(C422M)
		< RESISTOR >	
R201	1-249-435-11	CARBON 33K 5% 1/4W	
R202	1-249-438-11	CARBON 56K 5% 1/4W	
R203	1-249-429-11	CARBON 10K 5% 1/4W	
R301	1-249-417-11	CARBON 1K 5% 1/4W	
R302	1-249-417-11	CARBON 1K 5% 1/4W	
R303	1-249-417-11	CARBON 1K 5% 1/4W	
R304	1-249-417-11	CARBON 1K 5% 1/4W	
R306	1-249-413-11	CARBON 470 5% 1/4W	
R309	1-249-405-11	CARBON 100 5% 1/4W	
R311	1-249-423-11	CARBON 3.3K 5% 1/4W	
R312	1-249-429-11	CARBON 10K 5% 1/4W	
R313	1-249-423-11	CARBON 3.3K 5% 1/4W	
R314	1-249-429-11	CARBON 10K 5% 1/4W	
R315	1-249-417-11	CARBON 1K 5% 1/4W	
R316	1-249-417-11	CARBON 1K 5% 1/4W	
R317	1-249-419-11	CARBON 1.5K 5% 1/4W	
R318	1-249-441-11	CARBON 100K 5% 1/4W	
R319	1-247-903-00	CARBON 1M 5% 1/4W	
R321	1-249-417-11	CARBON 1K 5% 1/4W	
R322	1-249-417-11	CARBON 1K 5% 1/4W	
R323	1-249-417-11	CARBON 1K 5% 1/4W	
R324	1-249-417-11	CARBON 1K 5% 1/4W	
R330	1-249-417-11	CARBON 1K 5% 1/4W	
R331	1-249-417-11	CARBON 1K 5% 1/4W	
R342	1-249-417-11	CARBON 1K 5% 1/4W	
R351	1-249-436-11	CARBON 39K 5% 1/4W	
R352	1-249-436-11	CARBON 39K 5% 1/4W	
R353	1-249-436-11	CARBON 39K 5% 1/4W	
R354	1-249-436-11	CARBON 39K 5% 1/4W	
R355	1-249-436-11	CARBON 39K 5% 1/4W	
R356	1-249-436-11	CARBON 39K 5% 1/4W	
R357	1-249-436-11	CARBON 39K 5% 1/4W	
R358	1-249-436-11	CARBON 39K 5% 1/4W	
R359	1-247-903-00	CARBON 1M 5% 1/4W	
R361	1-249-431-11	CARBON 15K 5% 1/4W	
R362	1-249-431-11	CARBON 15K 5% 1/4W	
R363	1-249-431-11	CARBON 15K 5% 1/4W	
R364	1-249-431-11	CARBON 15K 5% 1/4W	

Ref. No.	Part No.	Description				Remark
R365	1-249-438-11	CARBON	56K	5%	1/4W	
R366	1-249-438-11	CARBON	56K	5%	1/4W	
R367	1-249-438-11	CARBON	56K	5%	1/4W	
R368	1-249-438-11	CARBON	56K	5%	1/4W	
R369	1-249-419-11	CARBON	1.5K	5%	1/4W	
R370	1-249-419-11	CARBON	1.5K	5%	1/4W	
R371	1-249-419-11	CARBON	1.5K	5%	1/4W	
R372	1-249-419-11	CARBON	1.5K	5%	1/4W	
R373	1-249-429-11	CARBON	10K	5%	1/4W	
R374	1-249-429-11	CARBON	10K	5%	1/4W	
R375	1-249-429-11	CARBON	10K	5%	1/4W	
R376	1-249-429-11	CARBON	10K	5%	1/4W	
R383	1-249-417-11	CARBON	1K	5%	1/4W	
R384	1-249-417-11	CARBON	1K	5%	1/4W	
R385	1-249-422-11	CARBON	2.7K	5%	1/4W	
R401	1-249-433-11	CARBON	22K	5%	1/4W	
R402	1-249-433-11	CARBON	22K	5%	1/4W	
R403	1-249-425-11	CARBON	4.7K	5%	1/4W	
R404	1-249-425-11	CARBON	4.7K	5%	1/4W	
R405	1-249-425-11	CARBON	4.7K	5%	1/4W	
R406	1-249-425-11	CARBON	4.7K	5%	1/4W	
R408	1-249-441-11	CARBON	100K	5%	1/4W	
R409	1-247-864-11	CARBON	24K	5%	1/4W	
R410	1-247-880-11	CARBON	110K	5%	1/4W	
R411	1-249-440-11	CARBON	82K	5%	1/4W	
R412	1-247-876-11	CARBON	75K	5%	1/4W	
R413	1-249-440-11	CARBON	82K	5%	1/4W	
R414	1-247-874-11	CARBON	62K	5%	1/4W	
R415	1-249-435-11	CARBON	33K	5%	1/4W	
R416	1-247-878-00	CARBON	91K	5%	1/4W	
R421	1-249-393-11	CARBON	10	5%	1/4W	
R422	1-249-393-11	CARBON	10	5%	1/4W	
R425	1-249-429-11	CARBON	10K	5%	1/4W	
R426	1-249-429-11	CARBON	10K	5%	1/4W	
R427	1-249-429-11	CARBON	10K	5%	1/4W	
R428	1-249-429-11	CARBON	10K	5%	1/4W	
R429	1-249-429-11	CARBON	10K	5%	1/4W	
R430	1-249-429-11	CARBON	10K	5%	1/4W	
R431	1-249-429-11	CARBON	10K	5%	1/4W	
R432	1-249-429-11	CARBON	10K	5%	1/4W	
R440	1-249-417-11	CARBON	1K	5%	1/4W	(C422M)
R441	1-249-417-11	CARBON	1K	5%	1/4W	(C422M)
R442	1-249-429-11	CARBON	10K	5%	1/4W	(C422M)
R501	1-249-393-11	CARBON	10	5%	1/4W	(C422M)
R553	1-249-402-11	CARBON	56	5%	1/4W	(C325M)
R563	1-249-402-11	CARBON	56	5%	1/4W	(C325M)

Ref. No.	Part No.	Description	Remark
		< SWITCH >	
⚠S201	1-571-722-11	SWITCH. VOLTAGE SELECTION (VOLTAGE SELECTOR) (E)	
		< CRYSTAL >	
X351	1-579-314-11	VIBRATOR. CRYSTAL (22.5MHz)	

****

MISCELLANEOUS

****

Ref. No.	Part No.	Description	Remark
9	1-690-847-11	WIRE (FLAT TYPE) (37 CORE) (C325M)	
9	1-690-848-11	WIRE (FLAT TYPE) (33 CORE) (C422M)	
10	1-690-849-11	WIRE (FLAT TYPE) (11 CORE)	
64	1-694-003-11	JAMPER. FILM (WITH TARMINAL)	
⚠76	1-575-651-21	CORD. POWER (AEP)	
⚠77	1-575-653-21	CORD. POWER (E)	
⚠78	1-574-358-11	CORD. POWER (WITH CONNECTOR) (C422M:AUS)	
⚠78	1-574-358-31	CORD. POWER (WITH CONNECTOR) (C325M:AUS)	
⚠79	1-558-946-21	CORD. POWER (C325M:UK)	
⚠79	1-590-379-11	CORD. POWER (C422M:UK)	
⚠80	1-569-007-11	ADAPTER. CONVERSION 2P (C325M:E)	
* 106	1-452-538-11	MAGNET	
111	1-590-849-11	WIRE. FLAT TYPE (5 CORE)	
⚠156	8-848-144-11	DEVICE. OPTICAL KSS-240A	
157	1-575-001-11	WIRE. FLAT TYPE (12 CORE)	
M101	X-4917-504-1	MOTOR ASSY. SLED	
M102	X-4917-523-3	MOTOR ASSY. SPINDLE	
M701	A-4604-585-A	MOTOR ASSY. ROTARY	
M702	A-4604-834-A	MOTOR ASSY. LOADING	
S701	1-572-713-11	SWITCH. PUSH (WITH CONNECTOR) (DOWN)	
⚠T901	1-449-955-11	TRANSFORMER. POWER (EXCEPT E)	
⚠T901	1-449-956-11	TRANSFORMER. POWER (E)	

****

Note : The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS *******************************	
	1-558-271-11	CORD, CONNECTION (C325M:AEP)	
	1-558-271-11	CORD, CONNECTION (C422M:AEP)	
	1-693-053-11	REMOTE COMMANDER (RM-D325) (C325M)	
	2-181-754-01	COVER, BATTERY (C325M)	
	3-754-847-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE)	
	3-754-847-41	MANUAL, INSTRUCTION (GERMAN, DUTCH, SWEDISH, ITALIAN) (AEP)	
*	4-944-040-01	CUSHION (FRONT)	
*	4-944-041-01	CUSHION (REAR)	
*	4-951-269-11	INDIVIDUAL CARTON (C325M)	
*	4-951-269-21	INDIVIDUAL CARTON (C422M:AEP, AUS)	

****

HARDWARE LIST

#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S
#2	7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S
#3	7-682-661-09	SCREW +PSW 4X8
#4	7-685-136-19	SCREW +P 2.6X12 TYPE2 NON-SLIT
#5	7-685-647-79	SCREW, TAPPING
#6	7-682-548-04	SCREW +BVTT 3X8 (S)
#7	7-682-554-04	SCREW +B 3X25
#8	7-621-255-15	SCREW +P 2X3

9-957-089-11

Sony Corporation
Audio Group

English
92C0472-1
Printed in Japan

© 1992. 3

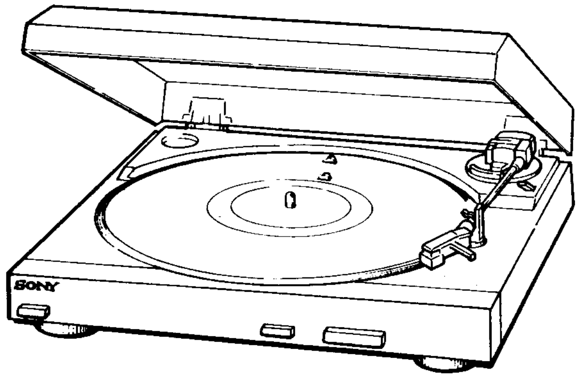
Published by Customer Relations and Service Group

PS-D707/D707P

SERVICE MANUAL

AEP Model
E Model
Tourist Model
PS-D707

UK Model
PS-D707P



PS-D707P is the STEREO TURNTABLE SYSTEM in LBT-D607CD/707CD

Photo: PS-D707

SPECIFICATIONS

Turntable	
Platter	30cm (12 in.)
Motor	DC servo motor
Drive system	Belt drive
Speed	33 ⅓ rpm/45 rpm switchable
Wow and flutter	0.15% (WRMS)
Signal-to-noise ratio	65 dB (DIN-B)
Automatic system	Return, reject, lead in
Tonearm	
Type	Dynamically balanced
Pivot-to-stylus length	206 mm (7 ⅞ in.)
Overall arm length	235 mm (9 ⅜ in.)
Cartridge	
Type	Moving magnet type
Frequency response	20 Hz-20kHz
Stylus	ND-155G
General	
Dimensions	355 × 93.5 × 355 mm(w/h/d) (14 × 3 ¾ × 14 inches)
Weight	Approx. 2.6 kg (4 lb 14 oz)
Power requirements	D707: AEP, Germany, Italian models 220V AC, 50/60Hz D707: Australia model 240 V AC, 50 Hz D707: E, Saudi Arabia models 110–120V, 220–240V adjustable, 50/60Hz
Power consumption	4 W
Accessory supplied	45-rpm adaptor (1)
Optional accessory	Replacement stylus ND-155G

Design and specificatins subject to change without notice.

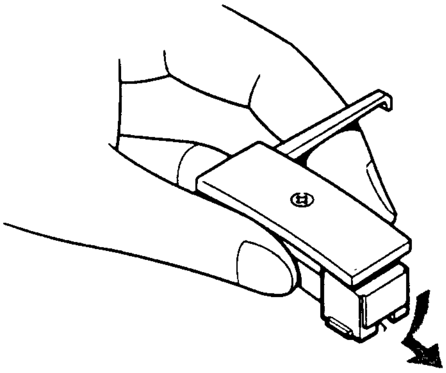
Note
This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

Note for Cartridge
Be careful not to use any cartridge except for specified one (Part No.: 4-944-756-01) as balance weight of pick up arm assy is fixed.

REPLACING THE STYLUS

Replace the stylus after about 400 hours of use because using a worn stylus will damage records.
An ND-155G replacement stylus is available at your Sony dealer.
Be sure to turn the amplifier off before proceeding with replacement.

1 While holding the cartridge, detach the stylus assembly as illustrated.
2 Insert the new stylus into the cartridge.



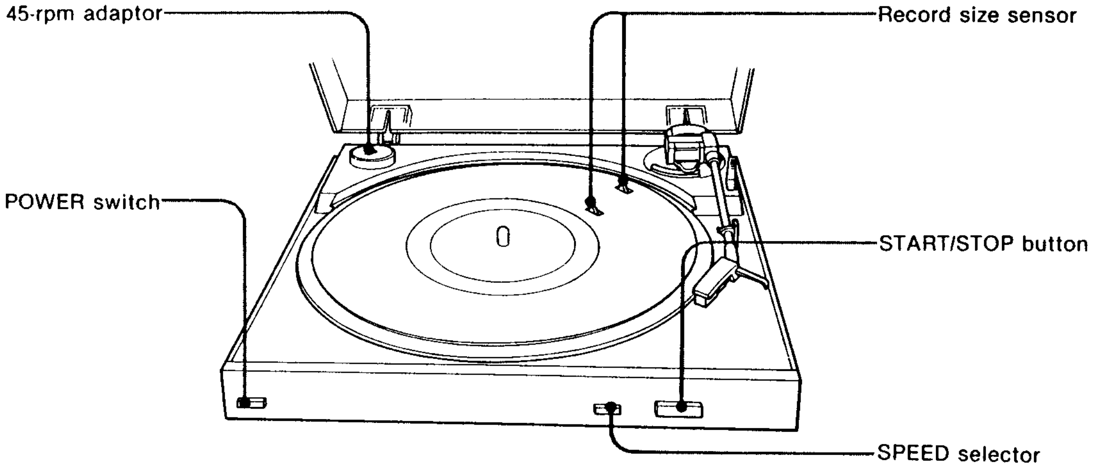
STEREO TURNTABLE SYSTEM

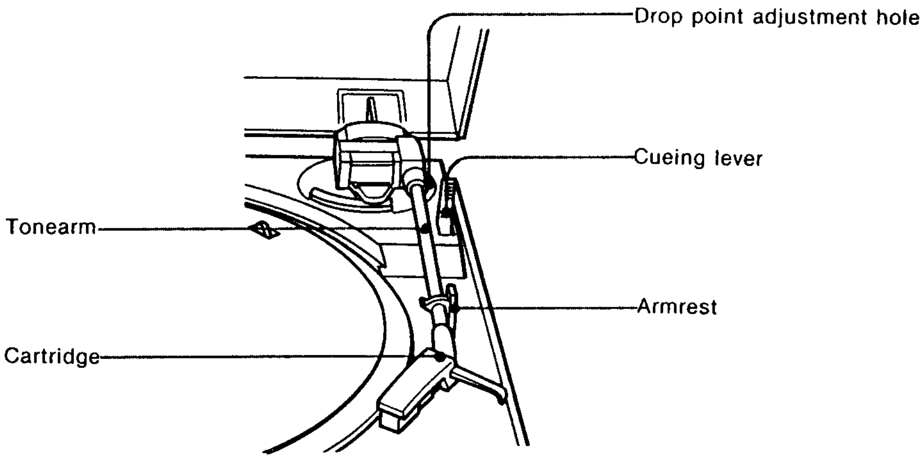
SONY®

MICROFILM

SECTION 1
GENERAL

1-1. LOCATION OF CONTROLS

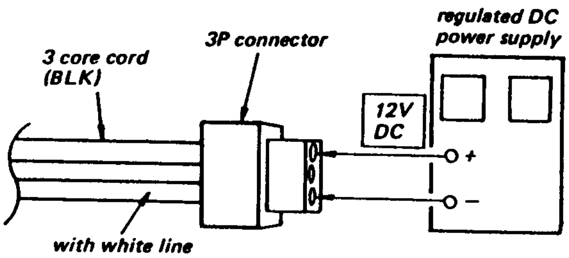

45-rpm adaptor
Record size sensor
POWER switch
START/STOP button
SPEED selector


Drop point adjustment hole
Cueing lever
Tonearm
Armrest
Cartridge

REPAIRING PRECAUTION (PS-D707P only)

[To supply B+ voltage]

The power of this unit is fed from LBT-D607CD or LBT-D707CD. Because of this, connect the regulated power supply as illustrated right when this unit alone operates.

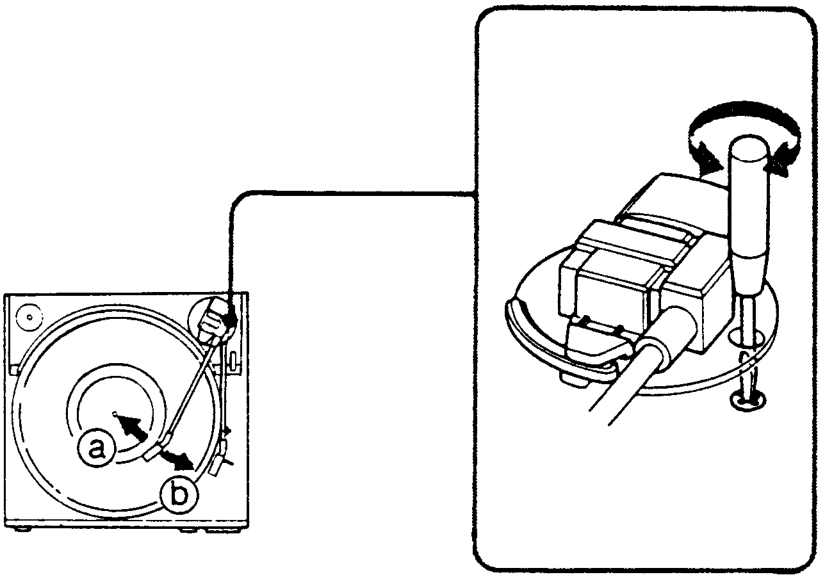

regulated DC power supply
3P connector
3 core cord (BLK)
12V DC
+
−
with white line

1-2. TONEARM DROP-POINT ADJUSTMENT

The tonearm drop-point during auto play has been factory-adjusted. If necessary, readjust it as follows.

To readjust the drop-point inward ⓐ, turn the screw clockwise with a screwdriver.
To readjust the drop-point outward ⓑ, turn the screw counterclockwise.

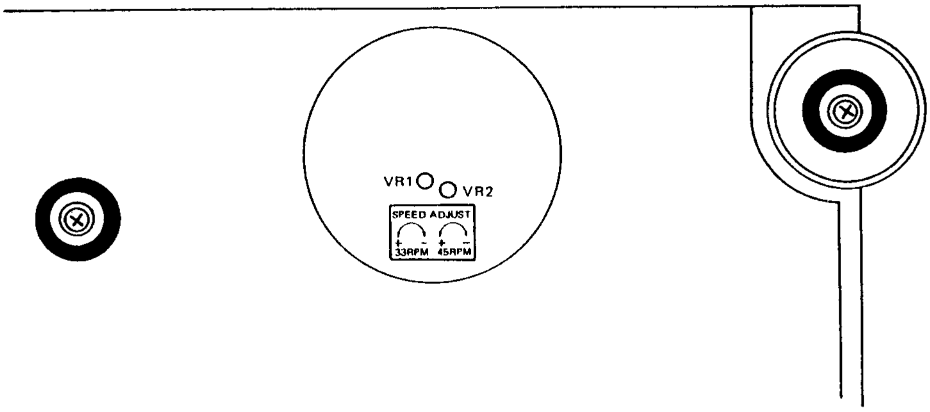
If the tonearm does not return to the arm rest automatically after play
Turn the adjustment screw counterclockwise.



1-3. Speed Adjustment

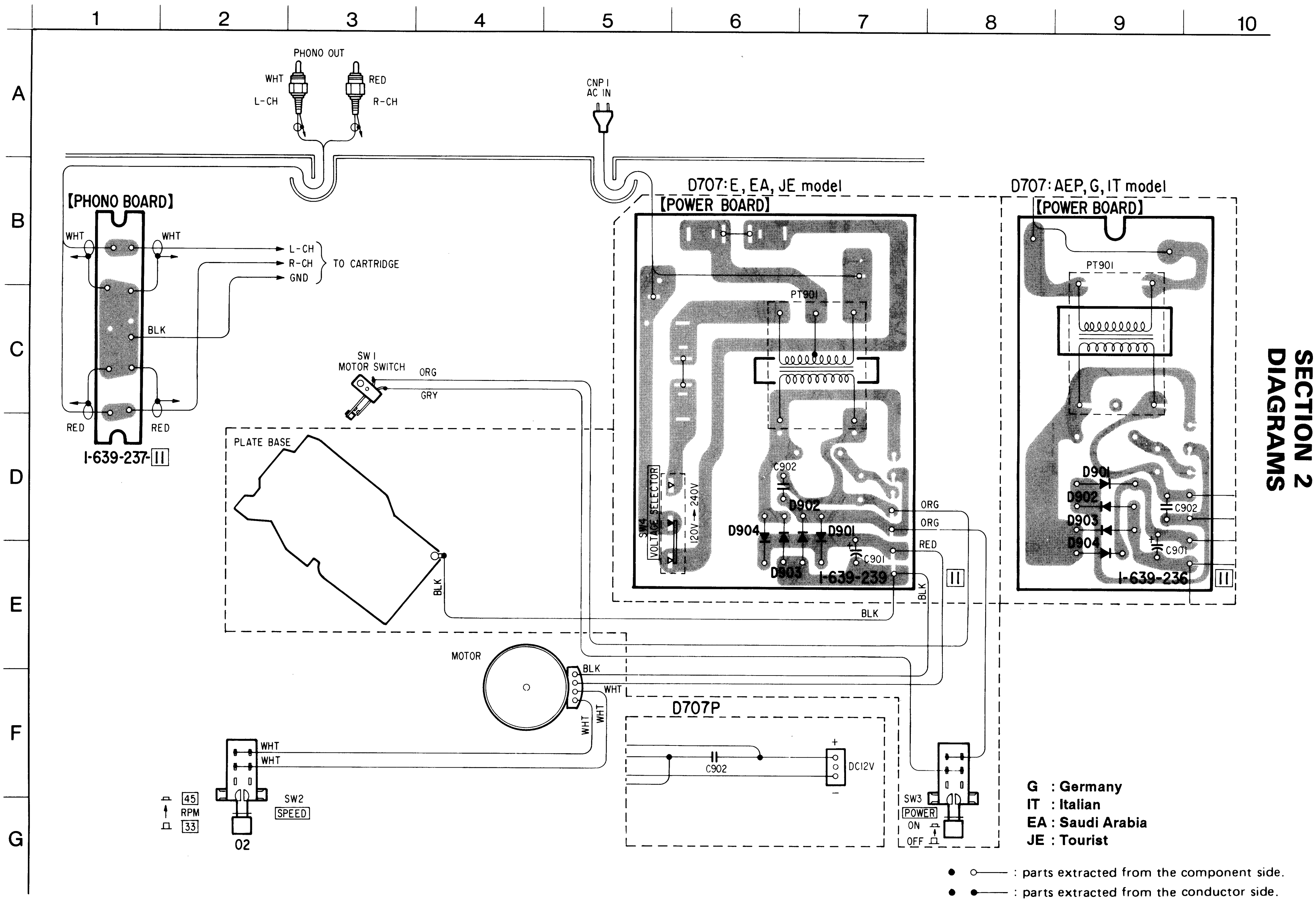
Note: Be sure to perform 45rpm adjustment before 33 rpm.

1. Place a stroboscope board on the turntable sheet.
2. Set the SPEED switch to 45.
   Press the START button.
   Adjust VR2 so that the striped pattern of stroboscope board is stationary.
3. Set the SPEED switch to 33.
   Adjust VR1 in the same way.



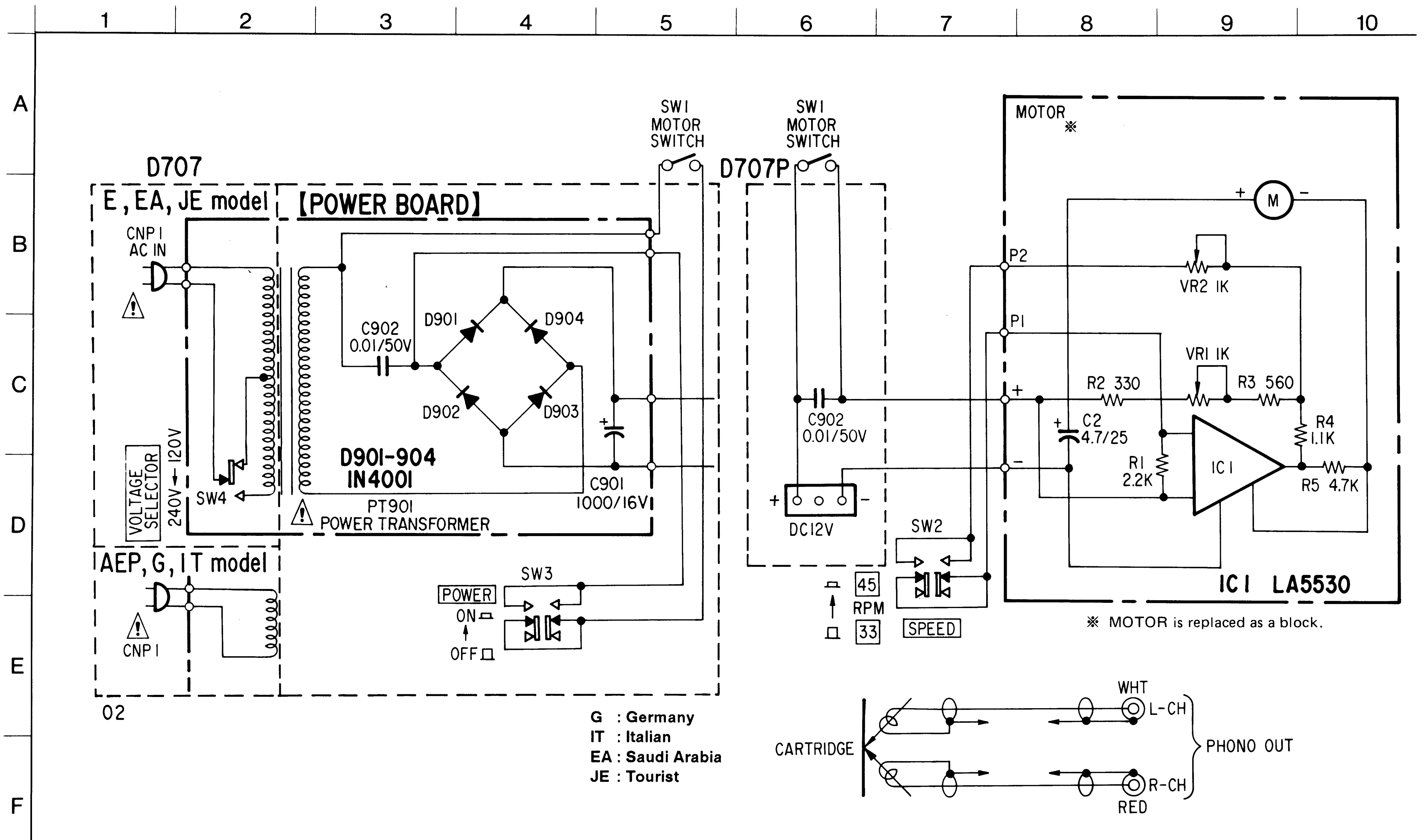
SECTION 2 DIAGRAMS

2-1. PRINTED WIRING BOARDS


PHONO OUT
WHT
L-CH
RED
R-CH
CNP1
AC IN
[PHONO BOARD]
L-CH
R-CH
GND
TO CARTRIDGE
BLK
1-639-237-II
SW1
MOTOR SWITCH
ORG
GRY
PLATE BASE
D707: E, EA, JE model
[POWER BOARD]
PT901
C902
D901
D902
D903
D904
C901
1-639-239
SW4
VOLTAGE SELECTOR
120V ↔ 240V
D707: AEP, G, IT model
[POWER BOARD]
1-639-236
MOTOR
D707P
DC12V
SW2
SPEED
45
RPM
33
02
SW3
POWER
ON
OFF
G : Germany
IT : Italian
EA : Saudi Arabia
JE : Tourist

- ○—— : parts extracted from the component side.
- ●—— : parts extracted from the conductor side.

2-2. SCHEMATIC DIAGRAM


D707
E, EA, JE model
CNP1
AC IN
VOLTAGE SELECTOR
240V ↔ 120V
SW4
AEP, G, IT model
CNP1
02
[POWER BOARD]
C902
0.01/50V
D901
D902
D903
D904
D901-904
1N4001
PT901
POWER TRANSFORMER
C901
1000/16V
SW1
MOTOR
SWITCH
D707P
DC12V
SW3
POWER
ON
OFF
SW2
45
RPM
33
SPEED
MOTOR ※
P2
P1
M
VR2 1K
VR1 1K
R2 330
R3 560
R4 1.1K
R5 4.7K
C2
4.7/25
R1
2.2K
IC1
IC1 LA5530
CARTRIDGE
WHT
L-CH
R-CH
RED
PHONO OUT
G : Germany
IT : Italian
EA : Saudi Arabia
JE : Tourist

※ MOTOR is replaced as a block.

Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

SECTION 3 EXPLODED VIEWS

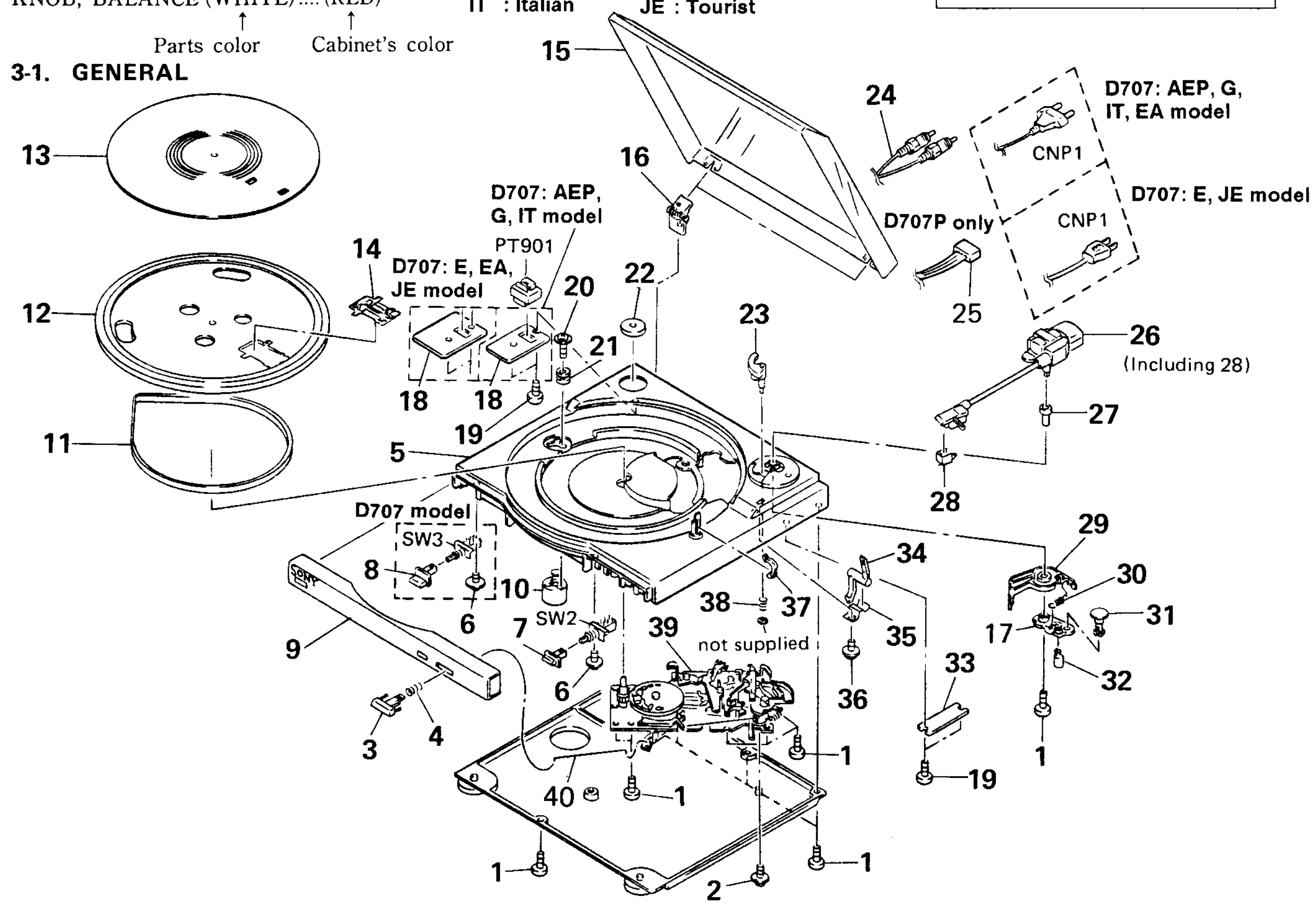
NOTE:
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Color indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE) .... (RED)
  ↑ Parts color ↑ Cabinet's color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.

G : Germany EA : Saudi Arabia
IT : Italian JE : Tourist

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board.

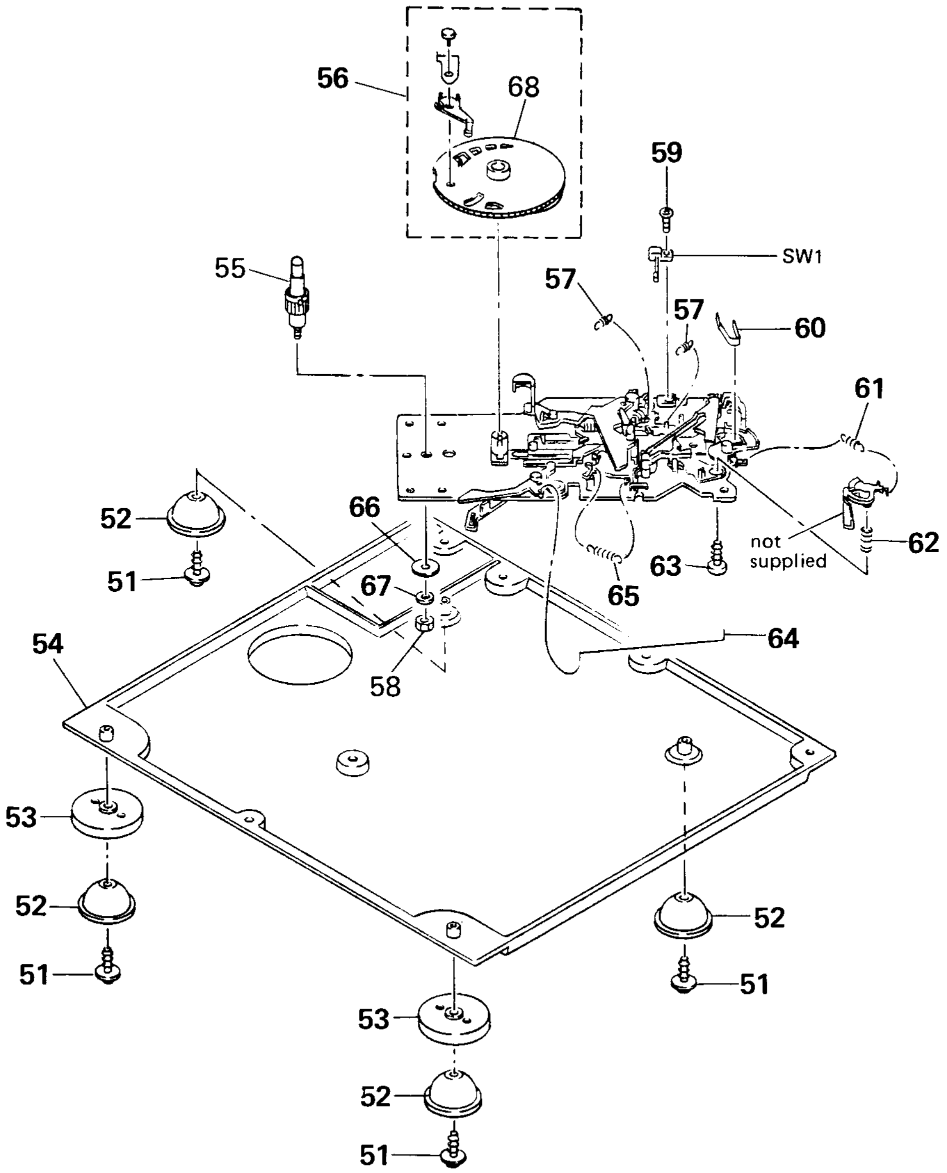
3-1. GENERAL



Ref. No.	Part No.	Description	Remark
1	4-946-233-01	SCREW #2WPT 3X12Y	
2	4-946-234-01	SCREW #2WPT 3X10X12Y	
3	4-944-680-01	BUTTON, START STOP(BLACK) (D707:EA3, JE, IT)	
3	4-944-680-11	BUTTON, START STOP(GRAY) (D707:AEP, G, EA3, JE, E/D707P)	
4	4-944-686-01	SPRING, RETURN	
* 5	4-944-678-01	CABINET, UPPER	
6	8-099-230-08	SCREW 3X8	
7	4-944-683-01	BUTTON, SPEED(BLACK)(D707:EA3, JE, IT, E)	
7	4-944-683-11	BUTTON, SPEED(GRAY) (D707:AEP, G, EA3, JE/D707P)	
8	4-944-681-01	BUTTON, POWER(BLACK)(D707:EA3, JE, IT)	
8	4-944-681-11	BUTTON, POWER(GRAY)(D707:AEP, G, EA3, JE, E)	
9	A-4660-102-A	PANEL (G) ASSY, FRONT(GRAY) (D707:AEP, G, EA3, JE, E)	
9	A-4660-103-A	PANEL (P-G) ASSY, FRONT(D707P)	
9	A-4660-104-A	PANEL (B) ASSY, FRONT(BLACK) (D707:EA3, JE, IT)	
10	1-541-872-11	MOTOR, DC (WITH PULLEY)	
11	4-944-743-01	BELT	
12	4-944-744-01	PLATER	
13	4-950-309-01	SHEET, RUBBER	
14	A-4325-130-A	SENSOR ASSY	
15	A-4604-844-A	COVER ASSY, DUST	
16	4-944-691-01	HINGE	
17	4-944-703-01	ARM (A), FEED	
* 18	1-639-239-11	POWER BOARD(D707:EA3, JE, E)	
* 18	1-639-236-11	POWER BOARD(D707:AEP, G, IT)	

Ref. No.	Part No.	Description	Remark
19	4-944-729-01	SCREW	
20	4-944-694-01	SCREW, SETTING MOTOR	
21	4-944-692-01	CUSHION, MOTOR	
22	3-701-806-00	ADAPTOR, EP	
23	4-944-675-01	ARM, ELEVATION	
24	1-551-294-00	CORD (PHONO)	
25	1-590-871-11	CORD (WITH CONNECTOR) 3P(D707P)	
26	A-4604-840-A	ARM ASSY, TONE	
* 27	4-944-672-01	BUSHING, TONE ARM	
28	4-944-756-01	CARTRIDGE	
29	4-944-704-01	ARM (B), FEED	
30	4-944-705-01	SPRING, FEED ARM	
31	4-944-759-01	ADJUSTMENT, CAM LEAD IN	
32	4-944-760-01	ADJUSTMENT, CAM LEAD AUTORETURN	
* 33	1-639-237-11	PC BOARD, PHONO	
34	4-944-674-01	LEVER, CUING	
* 35	4-944-685-01	BRACKET, CUING	
36	4-944-695-01	SCREW	
37	4-944-673-01	LOCKER, ARM	
38	4-944-687-01	SPRING, ELEVATION	
* 39	A-4604-842-A	MECHANICAL ASSY, BASE	
40	4-944-688-01	LINK, START CUT	
⚠CNP1	1-555-750-00	CORD, POWER(D707:AEP, G, EA3, IT)	
⚠CNP1	1-551-188-XX	CORD, POWER(D707:JE, E)	
⚠PT901	1-450-508-11	TRANSFORMER, POWER(D707)	
SW2	1-572-744-11	SWITCH, PUSH(SPEED)	
SW3	1-572-744-11	SWITCH, PUSH(POWER)(D707)	

3-2. MD SECTION



Ref. No.	Part No.	Description	Remark
51	4-946-234-01	SCREW #2WPT 3X10X12Y	
52	4-944-693-01	RUBBER, FOOT	
53	4-944-679-01	COVER, FOOT	
* 54	4-944-684-01	COVER, BOTTOM	
55	A-4604-892-A	SHAFT ASSY, CENTER	
56	A-4325-128-A	GEAR ASSY, RING	
* 57	4-944-725-01	SPRING, SWITCH	
58	4-944-730-01	NUT	
59	4-944-728-01	SCREW	
* 60	4-944-726-01	BRACKET, LOCKER	

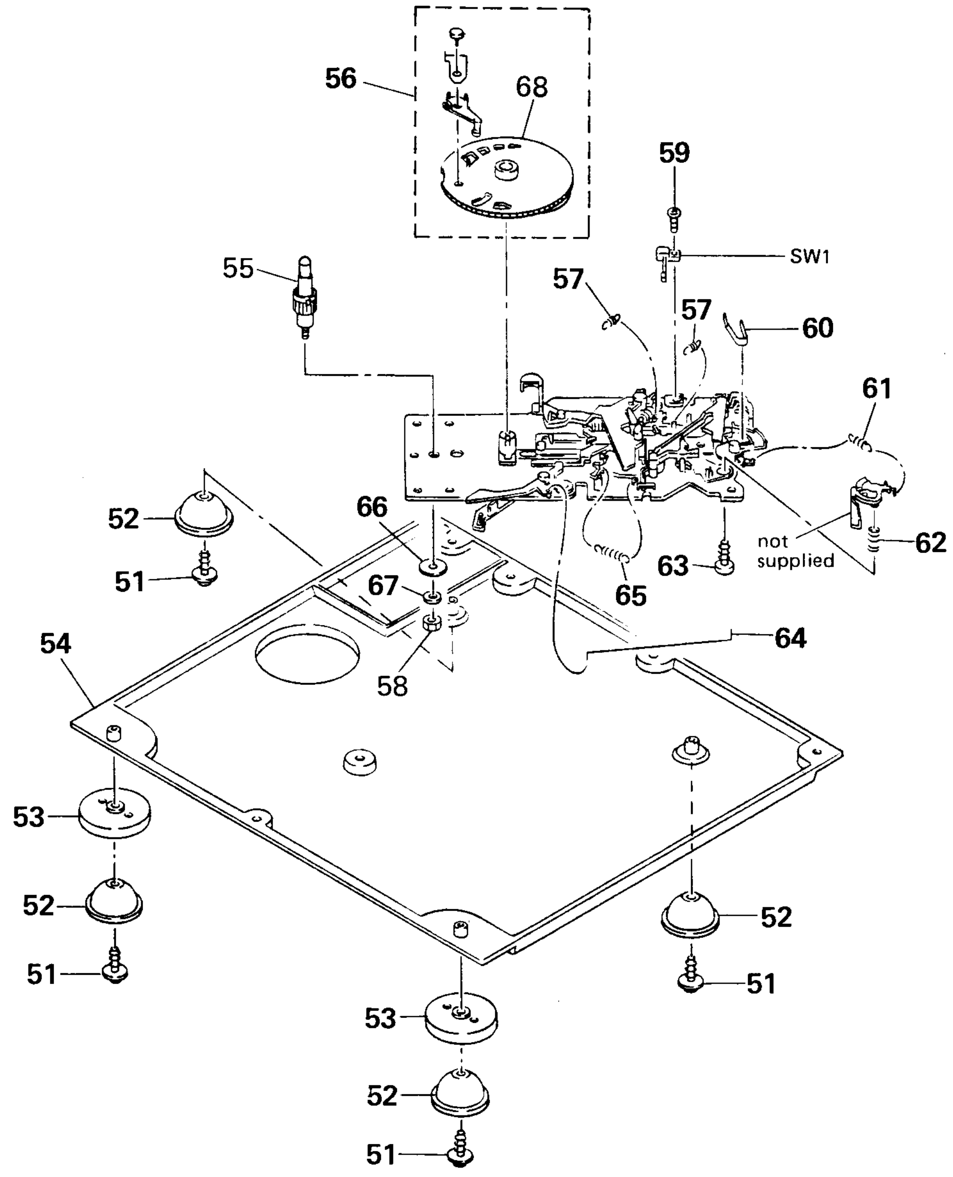
Ref. No.	Part No.	Description	Remark
61	4-944-723-01	SPRING, CONTROL	
62	4-944-722-01	SPRING, CUING CAM	
63	4-946-233-01	SCREW #2WPT 3X12Y	
64	4-944-727-01	LINK, REJECT	
65	4-944-724-01	SPRING, MECHANICAL	
66	4-944-731-01	WASHER, RAIN	
67	4-944-732-01	WASHER, SPRING	
68	4-944-738-01	GEAR, RING	
SW1	1-572-746-11	SWITCH, LEAF	

POWER

NOTE:
- Due to stan
  the parts lis
  parts speci
  components
- -XX, -X m
  they may
  the original
- RESISTOR
  All resistor
  METAL: M
  METAL OX
  F: nonflamm

Ref. No.	Pa
*	1-
*	1-
C901	1-
C902	1-
⚠CNP1	1-
⚠CNP1	1-
D901	8-
D902	8-
D903	8-
D904	8-
⚠PT901	1-
SW4	1-

3-2. MD SECTION



Ref.No.	Part No.	Description	Remark
51	4-946-234-01	SCREW #2WPT 3X10X12Y	
52	4-944-693-01	RUBBER, FOOT	
53	4-944-679-01	COVER, FOOT	
* 54	4-944-684-01	COVER, BOTTOM	
55	A-4604-892-A	SHAFT ASSY, CENTER	
56	A-4325-128-A	GEAR ASSY, RING	
* 57	4-944-725-01	SPRING, SWITCH	
58	4-944-730-01	NUT	
59	4-944-728-01	SCREW	
* 60	4-944-726-01	BRACKET, LOCKER	

Ref.No.	Part No.	Description	Remark
61	4-944-723-01	SPRING, CONTROL	
62	4-944-722-01	SPRING, CUING CAM	
63	4-946-233-01	SCREW #2WPT 3X12Y	
64	4-944-727-01	LINK, REJECT	
65	4-944-724-01	SPRING, MECHANICAL	
66	4-944-731-01	WASHER, RAIN	
67	4-944-732-01	WASHER, SPRING	
68	4-944-738-01	GEAR, RING	
SW1	1-572-746-11	SWITCH, LEAF	

SECTION 4
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal oxide-film resistor
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA....: μA...., uPA....: μPA....
  uPB....: μPB...., uPC....: μPC....
  uPD....: μPD....
- CAPACITORS
  uF: μF
- COILS
  uH: μH

G : **Germany**
IT : **Italian**
EA : **Saudi Arabia**
JE : **Tourist**

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref.No.	Part No.	Description	Remark
*	1-639-236-11	POWER BOARD(D707:AEP, G, IT)	
*	1-639-239-11	POWER BOARD(D707:EA3, JE, E)	
		***********	
		< CAPACITOR >	
C901	1-124-360-00	ELECT 1000uF 20% 16V (D707)	
C902	1-136-153-00	FILM 0.01uF 50V	
		< CONNECTOR >	
⚠CNP1	1-555-750-00	CORD, POWER(D707:AEP, G, EA3, IT)	
⚠CNP1	1-551-188-XX	CORD, POWER(D707:JE, E)	
		< DIODE >	
D901	8-719-200-02	DIODE 10E2(D707)	
D902	8-719-200-02	DIODE 10E2(D707)	
D903	8-719-200-02	DIODE 10E2(D707)	
D904	8-719-200-02	DIODE 10E2(D707)	
		< TRANSFORMER >	
⚠PT901	1-450-508-11	TRANSFORMER, POWER(D707)	
		< SWITCH >	
SW4	1-572-745-11	SELECTOR, VOLTAGE(D707:EA3, JE, E)	

Ref.No.	Part No.	Description	Remark
		MISCELLANEOUS *************	
10	1-541-872-11	MOTOR, DC (WITH PULLEY)	
24	1-551-294-00	CORD (PHONO)	
25	1-590-871-11	CORD (WITH CONNECTOR) 3P(D707P)	
* 33	1-639-237-11	PC BOARD, PHONO	
⚠CNP1	1-555-750-00	CORD, POWER(D707:AEP, G, EA3, IT)	
⚠CNP1	1-551-188-XX	CORD, POWER(D707:JE, E)	
SW1	1-572-746-11	SWITCH, LEAF	
SW2	1-572-744-11	SWITCH, PUSH(SPEED)	
SW3	1-572-744-11	SWITCH, PUSH(POWER)(D707)	
**			
		ACCESSORIES & PACKING MATERIALS ********************************	
	3-754-642-11	MANUAL, INSTRUCTION(D707:AEP, EA3, JE, E) (ENGLISH, FRENCH, SPANISH, PORTUGUESE)	
	3-754-642-41	MANUAL, INSTRUCTION(D707:AEP, G, IT) (GERMAN, DUTCH, SWEDISH, ITALIAN)	
*	4-944-749-01	CUSHION (FRONT)	
*	4-944-750-01	CUSHION (REAR)	
*	4-950-061-01	INDIVIDUAL CARTON(D707:AEP, G, EA3, JE, E)	
*	4-950-063-01	INDIVIDUAL CARTON(D707:EA3, JE, IT)	
*	4-950-064-01	INDIVIDUAL CARTON(D707P)	

9-956-982-11

Sony Corporation
Audio Group

English
92B0270-1
Printed in Japan

©1992.2

Published by Customer Relations and Service Group